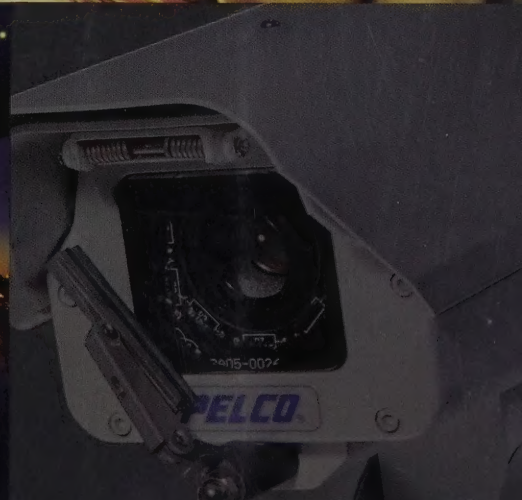
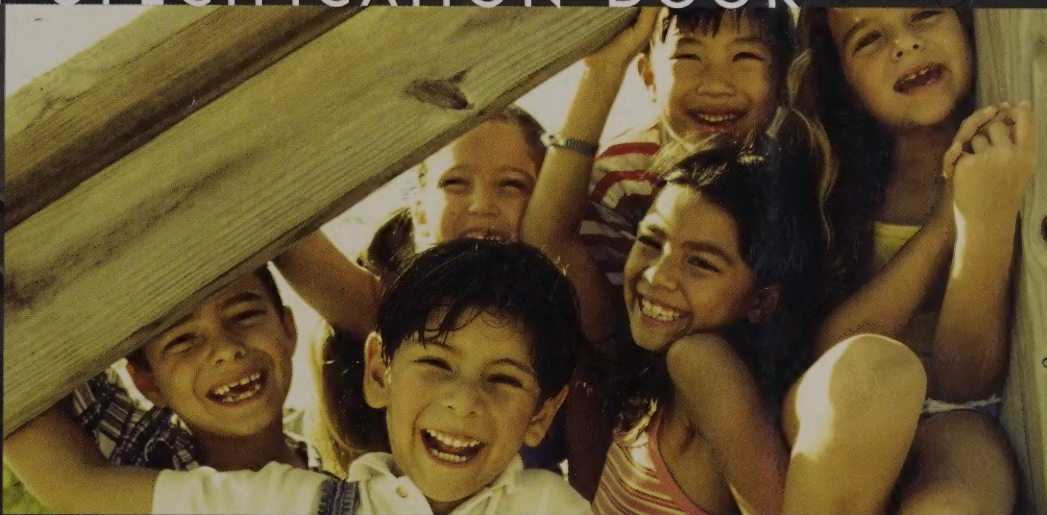


**PELCO**

# PRODUCT SPECIFICATION BOOK



**PROTECTING**

PEOPLE AND PROPERTY IN A MILLION  
LOCATIONS WORLDWIDE

**2004**

REVISED JANUARY 2004



## PELCO'S COMMITMENT TO EXCELLENCE



At Pelco, we firmly believe in providing our customers with innovative, superior quality products that are competitively priced and nearly always available off-the-shelf. We offer, by far, the most aggressive, complete array of customer services ever made available to the video security market. Furthermore, we guarantee 100% customer satisfaction. Simply stated, this means that we will always do whatever it takes to fully satisfy every customer, every time. You should accept absolutely nothing less from Pelco, because we accept nothing less from ourselves.

Being fanatically customer driven is an integral part of every Pelco job description. All of our people who deal with potential customer problems are authorized, and required, to make on-the-spot decisions as necessary in order to completely satisfy our customers, every time – without needing approval from anyone. No Pelco employee will ever be criticized for going too far in trying to help a customer.

I personally stand behind Pelco's commitment to excellence. If our organization ever fails to provide you with this level of support, please contact me. I personally handle every customer issue brought to my attention. As I'm sure you can tell, we appreciate your business.

David L. McDonald  
President and CEO





## **Thank You!**

We very much appreciate your taking the time to request the enclosed information. Providing effective Security & Surveillance Management is a huge undertaking, but we anticipate you will agree that Pelco is able to provide a complete, integrated offering of the very best video security solutions.

If you were previously unfamiliar with our company, Pelco is a world leader in the design, development, and manufacture of video security systems ideal for any industry. With a prestigious history of offering high-quality products, innovative technologies, and Guaranteed 100-percent Customer Satisfaction, Pelco has become one of the most sought-after product suppliers in the video security industry and produces a large selection of discreet camera domes, enclosures, positioning systems, video multiplexers, matrix systems, and digital video recorders – more than 5,500 finished products in all.

Please look over your requested information and let us know if we may help in any other way. Feel free to visit our web site at [www.pelco.com](http://www.pelco.com) or to contact the factory or your local Pelco Representative for any additional information or assistance you may need.

Again, thank you for your interest in Pelco. We look forward to hearing from you and working with you in the future. Additionally, we'd like to take a moment to introduce you to a few of the services that make doing business with Pelco so unique.

### **Guaranteed Ship Dates**

Pelco's EWS (Early Warning System) guarantees that unless your order is delayed by credit approval, it will be shipped on or before the promised ship date. If for any reason the order cannot be shipped as promised, it will be shipped airfreight at our expense.

### **Pelco Video Security Institute**

This is a valuable opportunity to learn about video security directly from the best people in the industry. Pelco's state-of-the-art training facilities are second to none. While here, you'll take a tour of the largest video security manufacturing facility in the world. No other company has that to offer.

### **24-Hour Technical Assistance Program (TAP)**

Our 24-hour, seven-day-a-week TAP program is designed to assist customers with any technical problem involving Pelco equipment. Day or night, Pelco personnel are ready to help you... just dial 800/289-9100 (US & Canada) or 1-559/292-1981 (International) and ask for Technical Assistance.

### **Pelco Mobile Product Showcase**

When you can't come to us, schedule the Pelco Mobile Product Showcase to come to you! It's where you and your customers can experience the latest in video security products and technologies available from Pelco – with hands-on training and demonstrations of a huge array of products. From enterprise-class DVRs and fully integrated matrix and video multiplexer systems to Spectra III and Esprit positioning systems, there's no better way to familiarize yourself with Pelco products – aside from visiting Pelco Headquarters.

### **24-Hour Replacement Parts & Repairs**

All replacement part orders, regardless of product or product age, by line item, will ship complete the next working day after receipt of the order – no exceptions. Any product not shipped by the next working day will be shipped when it becomes available at no charge to the customer, FOB destination, and priority overnight at Pelco's expense.





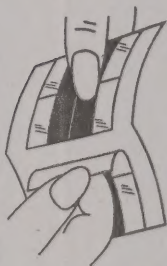


CAMERA SYSTEMS	CAMERAS	LENSES	ENCLOSURES	FIXED DOMES	SCANNERS, PAN/TILTS
CAMERA SYSTEMS	CAMERAS	LENSES	ENCLOSURES	FIXED DOMES	SCANNERS, PAN/TILTS
MOUNTS AND ADAPTERS	MISCELLANEOUS CAMERA SITE	POWER SUPPLIES AND RELAY BOXES	RECEIVERS	VIDEO CONDITIONING	DIGITAL NETWORK SYSTEMS
MOUNTS AND ADAPTERS	MISCELLANEOUS CAMERA SITE	POWER SUPPLIES AND RELAY BOXES	RECEIVERS	VIDEO CONDITIONING	DIGITAL NETWORK SYSTEMS
MONITORS	CONTROLS	ECONOMY SWITCHERS	MATRIX SWITCHERS	MULTIPLEXERS AND QUADS	VIDEO RECORDERS (DVRs/VCRs)
MONITORS	CONTROLS	ECONOMY SWITCHERS	MATRIX SWITCHERS	MULTIPLEXERS AND QUADS	VIDEO RECORDERS (DVRs/VCRs)
RACKS AND CONSOLES	MISCELLANEOUS CONTROL SITE	REFERENCE MATERIALS			
RACKS AND CONSOLES	MISCELLANEOUS CONTROL SITE	REFERENCE MATERIALS			

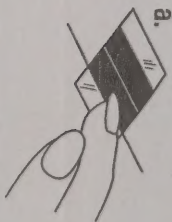


## INSTRUCTIONS

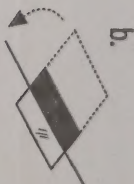
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3. Bend the tab at the crease away from the release paper and peel backwards.
4. Line up clear skirt on the tab (a.) with page edge and fold over (b.) to back side of page.



**PEEL OFF**



**PRESS ON**



**FOLD OVER**



## To Our Valued Customers:

Welcome and thank you for selecting Pelco as your source for video security products.

This year's catalog features many new and exciting products. Included in this wide array of superior and innovative products from Pelco are the Spectra III™ stainless steel, pressurized dome system; a set of ten new cameras offering a full range of imaging solutions for a variety of applications, including models which feature both low voltage and high voltage options; four new PC-based DVRs (DX7100, DX8000, as well as enterprise-class DX9100/DX9200 recorders); the high density CM9770 cross-point video matrix controller with reduced footprint for 2,048 inputs/512 outputs; and a series of PelcoNet™ digital networking products that bridge the gap between analog and IP-based digital video, including centralized video management via the VMX300 Series.

At Pelco we pride ourselves on being the best. In addition to this printed catalog, Pelco also offers a web site that is second to none in our industry. Recent updates to [pelco.com](http://pelco.com) make all information accessible within three clicks of a mouse. Here you can access the latest product information available from Pelco, all within a matter of seconds, 24 hours a day, seven days a week. All product specification sheets and manuals can be easily downloaded in Adobe® pdf format. Updates for our B.O.S.S.® CD, another Pelco information tool, can also be downloaded from this site.

B.O.S.S. is more than just a bid order specification software program. It allows you to quickly and easily select from over 4,000 finished-good items in the Pelco product line, obtain and print the latest product information (including pricing), as well as customize proposals or create purchase orders for the products you need.

If you would like to receive a free copy of B.O.S.S. on CD-ROM, please e-mail your request along with your name and address to our literature department ([lit@pelco.com](mailto:lit@pelco.com)) or call 1-800-289-9100 and ask for the Literature Department.

Also new from Pelco is our Mobile Product Showcase (MPS). It's big, it's blue, and it's bringing Pelco to you! Staffed by Pelco video security experts, MPS is always on the move, visiting dealers across the nation. It's an exciting new way to introduce and showcase Pelco video security technologies right at your front door. For more information on when Pelco's MPS will be in your neighborhood, contact your local Pelco Sales Representative.

At Pelco we are committed to providing you with the best possible customer services in the industry. Being fanatically customer driven is an integral part of who we are – just ask anyone who knows us. We offer Guaranteed Ship Dates, One-Day Turnaround on Service and Repairs, One-Day Turnaround on Parts, 24-Hour Technical Assistance, Off-the-Shelf Availability, and 100% Customer Satisfaction.

If there is anything we can do for you, please do not hesitate to call. Our friendly staff is here to help and we welcome the opportunity to work with you to fulfill your video security needs.

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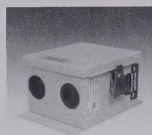
# PRODUCT OVERVIEW

The products in this catalog are organized according to the three main categories listed below. **Camera Site Equipment** contains products necessary to provide video at the surveillance site; **Power and Communication Equipment** contains products that may be needed to interface between the camera and control sites; and **Control Site Equipment** contains products needed for viewing, control and recording of the video. (See opposite page for sample configurations). A detailed listing of these products can be found in the Contents section of this book. Should you need help selecting equipment or have questions about any of our products, please contact Pelco for assistance.

**Camera Site Equipment**



**Power and Communication**



**Control Site Equipment**



## Camera Site Equipment



- Camera Systems Camclosures®, Spectra®, Esprit®, ImagePak®, and DomePak®
- Cameras Color, Monochrome, Integrated Lens
- Lenses Fixed Focal, Varifocal, Motorized Zoom
- Enclosures Indoor, Outdoor, Specialty, High Security
- Domes Fixed Mount Domes
- Scanners, Pan & Tilts Legacy® Integrated Positioning Systems, Indoor, Outdoor, Explosion-Proof
- Mounts and Adapters Camera, Enclosure, Dome, Scanner and Pan/Tilt Mounts
- Miscellaneous Camera Site Protocol Translators, IR Illuminator, Service/Installation Tools

## Power and Communication Equipment



- Power Supplies Power Supplies, Relay Boxes
- Receivers/Translators Coaxitron®, RS-422 (P Protocol), Legacy®
- Video Conditioning Amplifiers, Ground Fault Protection
- Digital Network Systems PelcoNet™ Transmitters, Receivers, and Network Recorder

## Control Site Equipment

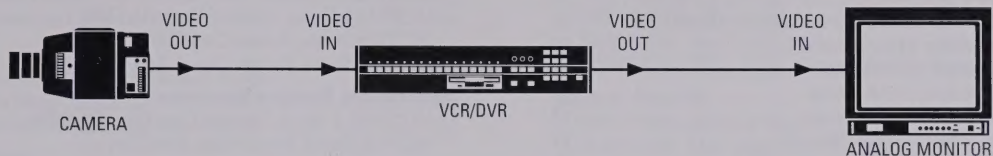


- Monitors Monochrome, Color, Quad, Flat Screen
- Controls Direct/Multi-Cable
- Economy Switchers Manual, Sequential
- Matrix Switchers 6700, 6800, 9740, 9760, 9770, VMX200, VMX300 Series
- Multiplexers and Quads Genex® Series Multiplexer (including Keyboards and Server), Quad Compressors
- Video Recorders (DVRs/VCRs) Digital Video Recorders, Digital Surveillance System, Time-Lapse Recorders
- Racks and Consoles Desktop Consoles, Rack Kits, Lock Boxes, and Monitor Mounts
- Miscellaneous Control Site Video Motion Detector, Screen Splitter, Time-Date Generator

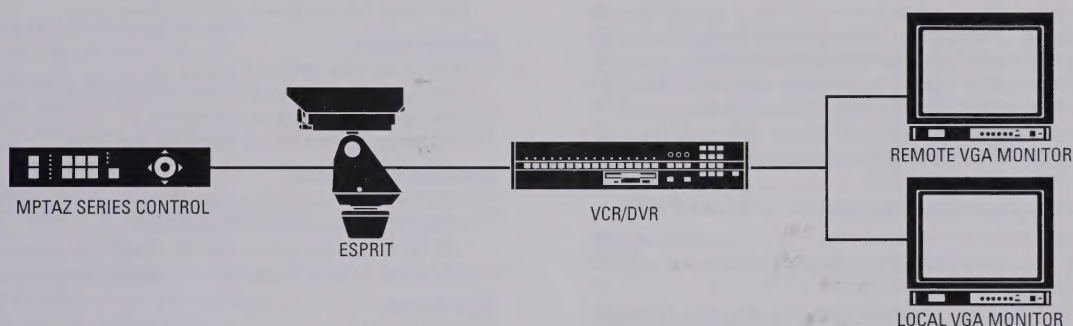


# SAMPLE SYSTEM CONFIGURATIONS

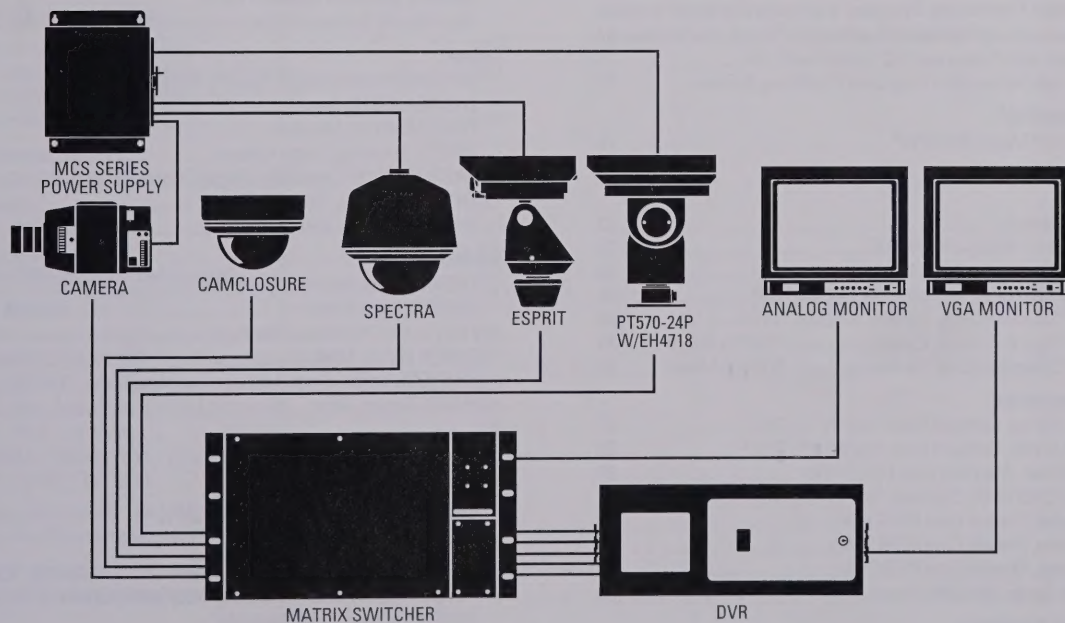
The samples below illustrate basic systems and are not intended to be representative of all possible system configurations. Please consult Pelco for assistance in designing a system that is suitable for your application.



**BASIC VIDEO SECURITY (FIXED CAMERA)**



**BASIC VIDEO SECURITY POSITIONING SYSTEM (PTZ)**



**TYPICAL DIGITAL VIDEO SECURITY SYSTEM**





## Camera Site Equipment

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The following items are discontinued and have been removed from this catalog.

## Camclosure® Integrated Camera Systems

ICS100CR3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS100-CR3A Color, Fixed Focal, Auto Iris	No replacement
ICS100CS3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS100CS3A Color, Fixed Focal, Auto Iris	No replacement
ICS101-CR3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS101-CR3A Color, Fixed Focal, Auto Iris	No replacement
ICS101-CS3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS101-CS3A Color, Fixed Focal, Auto Iris	No replacement
ICS150-CR3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS150-CR3A Color, Fixed Focal, Auto Iris	No replacement
ICS150-CS3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS150-CS3A Color, Fixed Focal, Auto Iris	No replacement
ICS151-CR3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS151-CR3A Color, Fixed Focal, Auto Iris	No replacement
ICS151-CS3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS151-CS3A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CA3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CA3A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CC3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CC3A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CR3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CR3A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CS3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS200-CS3A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CA3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CA3A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CC3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CC3A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CR3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CR3A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CS3.6A Color, Fixed Focal, Auto Iris	No replacement
ICS300-CS3A Color, Fixed Focal, Auto Iris	No replacement

## Cameras

CC3320-3 Color, Standard Res, PAL	Use CC3710S-7X
CC3600H-2 Color, High Res, NTSC	Use CC3610H-6
CC3600H-2X Color, High Res, PAL	Use CC3610H-6X
CC3700H-2 Color, High Res, NTSC	Use CC3710H-6
CC3700H-2X Color, High Res, PAL	Use CC3710H-6X
CC3700S-2 Color, Standard Res, NTSC	Use CC3710S-6
CC3700S-2X Color, Standard Res, PAL	Use CC3710S-6X
CC4620-3 Color, High Res, PAL	Use CC3710H-7X
MC3600H-2 Monochrome, High Res. EIA	Use MC3610H-6
MC3700S-2 Monochrome, Standard Res, EIA	Use MC3710S-6
MC3820-2X Monochrome, Standard Res, CCIR	Use MC3710S-6X
MC3820-3 Monochrome, Standard Res, CCIR	Use MC3710S-7X
MC5720-3 Monochrome, High Res, CCIR	Use MC3710H-7X

## Lenses

13VA3.5-8 Varifocal, Manual Iris	Use 13VA3-8
13VD3.5-8 Varifocal, Auto Iris (Direct Drive)	Use 13VD3-8

## Relay Boxes

RB24/220 Relay Box	No replacement
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## PelcoNet™ Digital Network Systems

NET101R Single Channel	Use NET300R
NET101R-A Single Channel w/Audio	Use NET350R
NET101T Single Channel	Use NET300T
NET101T-A Single Channel w/Audio	Use NET350T
NET104A Four Channel w/Audio	No replacement

## Monitors

PMC14F 14-inch Color Monitor	Use PMC14H
------------------------------	------------

## Controls

MLZ6DT/220 Lens Control	No replacement
MPS524DT/220 Scanner Control	Use MPTAZ24DT/220
MPS5DT Scanner Control	Use MPTAZ115DT
MPT115DT Pan/Tilt Control	Use MPTAZ115DT
MPT1510CAZ Pan/Tilt Control	No replacement
MPT1510DT Pan/Tilt Control	No replacement
MPT9008CZ Coaxitron w/Integral Switcher	No replacement
MPT9008PZ Coaxitron w/Integral Switcher	No replacement
MPTA115DT Pan/Tilt Control	Use MPTAZ Series
MPTAZ220DT Pan/Tilt, Scanner, Lens Control	No replacement
MPTAZ4DT Pan/Tilt Control	Use MPTAZ24DT

## Quads

QD104C-X Color Quad Processor	No replacement
QD104M-X Monochrome Quad Processor	No replacement

## Recorders

DX7000 Series	Use DX7100 Series
DX9000 Series	Use DX9100/DX9200 Series

## Rack Kits

RMA14S Monitor Rack	No replacement
RMA20S Monitor Rack	No replacement





## CAMERA SYSTEMS

**Easy to Order...Easy to Install**

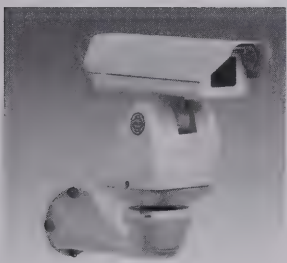
### Camclosure® Integrated Fixed Surveillance System

The Camclosure integrated camera system brings together all the elements of a typical, fixed indoor/outdoor security installation. Camclosure combines a camera, lens, enclosure, and mounting system and integrates them into a small, discreet, compact, extremely rugged, very easy-to-install package. Choose from five versatile Camclosure designs. The highly rugged system is available with a wide range of optics packages. Simply choose the Camclosure and the camera/lens combination, and we will ship it to you ready to install.



### Spectra®

Spectra III™ represents the security industry's leading high speed/variable speed integrated dome system and is widely known for its smooth, continual motion control. Spectra dome systems integrate a camera, lens, dome drive, receiver, and enclosure into a stylish, convenient surveillance package. Four different high resolution integrated optics packages (IOP) that feature LowLight™ technology are available, including a color/black-white camera that boasts wide dynamic range and built-in motion detection. Indoor, outdoor, heavy duty, stainless steel, and pressurized models are available.



### Esprit®

Esprit integrated pan and tilt systems feature the same industry-leading motion control as found in Spectra dome systems. The all-in-one Esprit pan/tilt unit includes receiver, enclosure, heater, defroster, and 24 VAC power supply. Models with cameras that feature LowLight technology, auto focus, integrated optics packages (IOP), or pressurized integrated optics cartridge (IOC) are available. Users may also choose models that allow them to install their own camera/lens combinations. An optional window wiper is also available with selected models.

### ImagePak® and DomePak®

Create your own integrated fixed surveillance system. Select from Pelco's large variety of enclosures, domes, cameras, lenses, and mount to create your own integrated camera system. We'll put your system together for you free of charge. With all options included and installed, our variety of product offerings can save you time and installation costs. All you do is mount the enclosure or dome, connect the power and video, and you're on your way!

Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about these products can be found on the related specification sheets within this book.\*

- ICS090 Camclosure Selection Guide
- ICS100 Camclosure Selection Guide
- ICS150 Camclosure Selection Guide
- ICS200/ICS300 Camclosure Selection Guide
- Spectra III Positioning Systems Feature Comparison
- Spectra III Series Selection Guide
- Spectra III Specialty (Heavy-Duty, Stainless Steel, and Pressurized) Selection Guide
- Esprit with IOP Camera Selection Guide

- Esprit with Pressurized IOC Camera Selection Guide
- Esprit ImagePak Selection Guide, Color
- Esprit ImagePak Selection Guide, Monochrome
- EH3500 Series ImagePak Selection Guide, Color
- EH3500 Series ImagePak Selection Guide, Monochrome
- EH2500 Series ImagePak Selection Guide, Color
- EH2500 Series ImagePak Selection Guide, Monochrome
- DF5 Series DomePak Selection Guide
- DF8 Series DomePak Selection Guide

(Consult factory for all other ImagePak configurations.)

\*Product specification sheets for Camclosure®, Spectra®, Esprit® products begin immediately after the last selection guide. Specification sheets for housings, cameras and lenses which make up ImagePak and DomePak offerings can be found in their applicable product sections (Cameras, Lenses, Enclosures, and Fixed Domes).

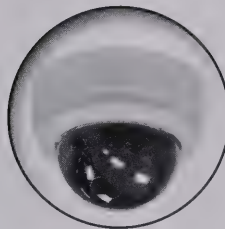
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# ICS090 Series Selection Guide

## WHITE FINISH, INDOOR

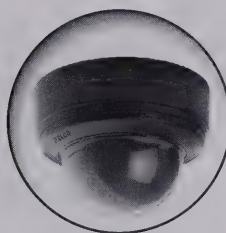
ICS090  
Surface Mount/In-Ceiling  
Combination, White Finish



			NTSC Models		PAL Models		
			Lens/Iris	BNC Connector	UTP Unshielded Twisted Pair	BNC Connector	UTP Unshielded Twisted Pair
High Resolution, Color	Smoked Dome	2.9mm	ICS090-CR3	ICS090-CR3T	ICS090-CS3	ICS090-CS3T	
		3.6mm	ICS090-CR3.6	ICS090-CR3.6T	ICS090-CS3.6	ICS090-CS3.6T	
		6mm	ICS090-CR6	ICS090-CR6T	ICS090-CS6	ICS090-CS6T	
		8mm	ICS090-CR8	ICS090-CR8T	ICS090-CS8	ICS090-CS8T	
		12mm	ICS090-CR12	ICS090-CR12T	ICS090-CS12	ICS090-CS12T	
	Clear Dome	3.0-6.0mm/auto iris	ICS090-CRV3A	ICS090-CRV3AT	ICS090-CSV3A	ICS090-CSV3AT	
		4.0-9.0mm/auto iris	ICS090-CRV4A	ICS090-CRV4AT	ICS090-CSV4A	ICS090-CSV4AT	
		2.9mm	ICS091-CR3	ICS091-CR3T	ICS091-CS3	ICS091-CS3T	
		3.6mm	ICS091-CR3.6	ICS091-CR3.6T	ICS091-CS3.6	ICS091-CS3.6T	
		6mm	ICS091-CR6	ICS091-CR6T	ICS091-CS6	ICS091-CS6T	
Standard Resolution, Color	Smoked Dome	8mm	ICS091-CR8	ICS091-CR8T	ICS091-CS8	ICS091-CS8T	
		12mm	ICS091-CR12	ICS091-CR12T	ICS091-CS12	ICS091-CS12T	
		3.0-6.0mm/auto iris	ICS091-CRV3A	ICS091-CRV3AT	ICS091-CSV3A	ICS091-CSV3AT	
		4.0-9.0mm/auto iris	ICS091-CRV4A	ICS091-CRV4AT	ICS091-CSV4A	ICS091-CSV4AT	
		2.9mm	ICS090-CA3	ICS090-CA3T	ICS090-CC3	ICS090-CC3T	
	Clear Dome	3.6mm	ICS090-CA3.6	ICS090-CA3.6T	ICS090-CC3.6	ICS090-CC3.6T	
6mm		ICS090-CA6	ICS090-CA6T	ICS090-CC6	ICS090-CC6T		
8mm		ICS090-CA8	ICS090-CA8T	ICS090-CC8	ICS090-CC8T		
12mm		ICS090-CA12	ICS090-CA12T	ICS090-CC12	ICS090-CC12T		
2.9mm		ICS091-CA3	ICS091-CA3T	ICS091-CC3	ICS091-CC3T		
Standard Resolution, B-W	Smoked Dome	3.6mm	ICS091-CA3.6	ICS091-CA3.6T	ICS091-CC3.6	ICS091-CC3.6T	
		6mm	ICS091-CA6	ICS091-CA6T	ICS091-CC6	ICS091-CC6T	
		8mm	ICS091-CA8	ICS091-CA8T	ICS091-CC8	ICS091-CC8T	
		12mm	ICS091-CA12	ICS091-CA12T	ICS091-CC12	ICS091-CC12T	
		2.9mm	ICS090-MA3	ICS090-MA3T	ICS090-MC3	ICS090-MC3T	
	Clear Dome	3.6mm	ICS090-MA3.6	ICS090-MA3.6T	ICS090-MC3.6	ICS090-MC3.6T	
		6mm	ICS090-MA6	ICS090-MA6T	ICS090-MC6	ICS090-MC6T	
		8mm	ICS090-MA8	ICS090-MA8T	ICS090-MC8	ICS090-MC8T	
		12mm	ICS090-MA12	ICS090-MA12T	ICS090-MC12	ICS090-MC12T	
		2.9mm	ICS091-MA3	ICS091-MA3T	ICS091-MC3	ICS091-MC3T	
	Smoked Dome	3.6mm	ICS091-MA3.6	ICS091-MA3.6T	ICS091-MC3.6	ICS091-MC3.6T	
		6mm	ICS091-MA6	ICS091-MA6T	ICS091-MC6	ICS091-MC6T	
		8mm	ICS091-MA8	ICS091-MA8T	ICS091-MC8	ICS091-MC8T	
		12mm	ICS091-MA12	ICS091-MA12T	ICS091-MC12	ICS091-MC12T	
		2.9mm	ICS090-MA3	ICS090-MA3T	ICS090-MC3	ICS090-MC3T	



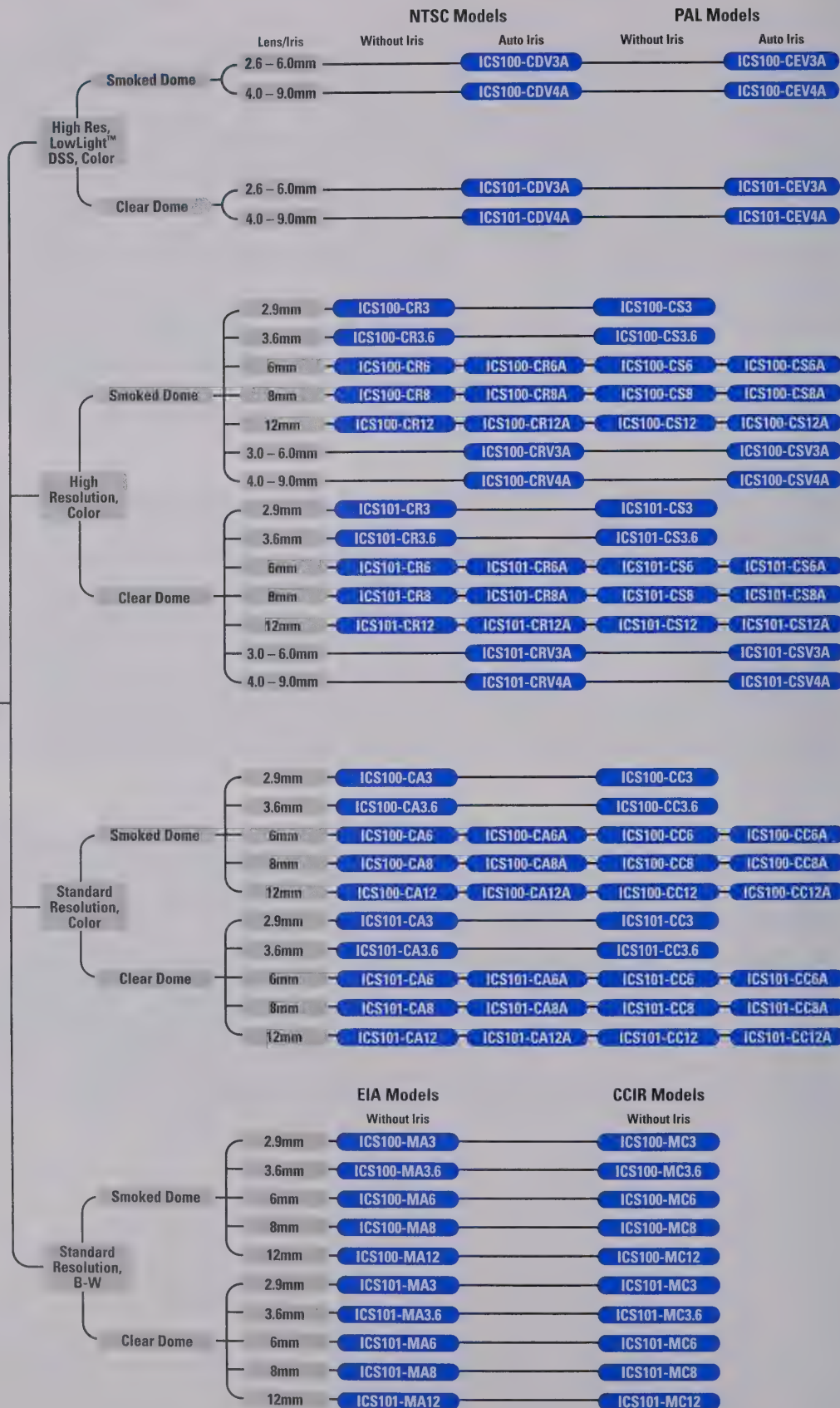
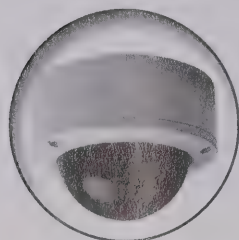
ICS090  
Surface Mount/In-Ceiling  
Combination, Black Finish



		NTSC Models				PAL Models			
		Lens/Iris	BNC Connector	UTP Unshielded Twisted Pair		BNC Connector	UTP Unshielded Twisted Pair		
High Resolution, Color	Smoked Dome	2.9mm	ICS090B-CR3	ICS090B-CR3T		ICS090B-CS3	ICS090B-CS3T		
		3.6mm	ICS090B-CR3.6	ICS090B-CR3.6T		ICS090B-CS3.6	ICS090B-CS3.6T		
		6mm	ICS090B-CR6	ICS090B-CR6T		ICS090B-CS6	ICS090B-CS6T		
		8mm	ICS090B-CR8	ICS090B-CR8T		ICS090B-CS8	ICS090B-CS8T		
		12mm	ICS090B-CR12	ICS090B-CR12T		ICS090B-CS12	ICS090B-CS12T		
		3.0-6.0mm/auto iris	ICS090B-CRV3A	ICS090B-CRV3AT		ICS090B-CSV3A	ICS090B-CSV3AT		
	Clear Dome	4.0-9.0mm/auto iris	ICS090B-CRV4A	ICS090B-CRV4AT		ICS090B-CSV4A	ICS090B-CSV4AT		
		2.9mm	ICS091B-CR3	ICS091B-CR3T		ICS091B-CS3	ICS091B-CS3T		
		3.6mm	ICS091B-CR3.6	ICS091B-CR3.6T		ICS091B-CS3.6	ICS091B-CS3.6T		
		6mm	ICS091B-CR6	ICS091B-CR6T		ICS091B-CS6	ICS091B-CS6T		
Standard Resolution, Color	Smoked Dome	8mm	ICS091B-CR8	ICS091B-CR8T		ICS091B-CS8	ICS091B-CS8T		
		12mm	ICS091B-CR12	ICS091B-CR12T		ICS091B-CS12	ICS091B-CS12T		
		3.0-6.0mm/auto iris	ICS091B-CRV3A	ICS091B-CRV3AT		ICS091B-CSV3A	ICS091B-CSV3AT		
		4.0-9.0mm/auto iris	ICS091B-CRV4A	ICS091B-CRV4AT		ICS091B-CSV4A	ICS091B-CSV4AT		
	Clear Dome	2.9mm	ICS090B-CA3	ICS090B-CA3T		ICS090B-CC3	ICS090B-CC3T		
		3.6mm	ICS090B-CA3.6	ICS090B-CA3.6T		ICS090B-CC3.6	ICS090B-CC3.6T		
		6mm	ICS090B-CA6	ICS090B-CA6T		ICS090B-CC6	ICS090B-CC6T		
		8mm	ICS090B-CA8	ICS090B-CA8T		ICS090B-CC8	ICS090B-CC8T		
	Clear Dome	12mm	ICS090B-CA12	ICS090B-CA12T		ICS090B-CC12	ICS090B-CC12T		
		2.9mm	ICS091B-CA3	ICS091B-CA3T		ICS091B-CC3	ICS091B-CC3T		
		3.6mm	ICS091B-CA3.6	ICS091B-CA3.6T		ICS091B-CC3.6	ICS091B-CC3.6T		
		6mm	ICS091B-CA6	ICS091B-CA6T		ICS091B-CC6	ICS091B-CC6T		
		8mm	ICS091B-CA8	ICS091B-CA8T		ICS091B-CC8	ICS091B-CC8T		
		12mm	ICS091B-CA12	ICS091B-CA12T		ICS091B-CC12	ICS091B-CC12T		
Standard Resolution, B-W	Smoked Dome	2.9mm	ICS090B-MA3	ICS090B-MA3T		ICS090B-MC3	ICS090B-MC3T		
		3.6mm	ICS090B-MA3.6	ICS090B-MA3.6T		ICS090B-MC3.6	ICS090B-MC3.6T		
		6mm	ICS090B-MA6	ICS090B-MA6T		ICS090B-MC6	ICS090B-MC6T		
		8mm	ICS090B-MA8	ICS090B-MA8T		ICS090B-MC8	ICS090B-MC8T		
		12mm	ICS090B-MA12	ICS090B-MA12T		ICS090B-MC12	ICS090B-MC12T		
		2.9mm	ICS091B-MA3	ICS091B-MA3T		ICS091B-MC3	ICS091B-MC3T		
	Clear Dome	3.6mm	ICS091B-MA3.6	ICS091B-MA3.6T		ICS091B-MC3.6	ICS091B-MC3.6T		
		6mm	ICS091B-MA6	ICS091B-MA6T		ICS091B-MC6	ICS091B-MC6T		
		8mm	ICS091B-MA8	ICS091B-MA8T		ICS091B-MC8	ICS091B-MC8T		
		12mm	ICS091B-MA12	ICS091B-MA12T		ICS091B-MC12	ICS091B-MC12T		

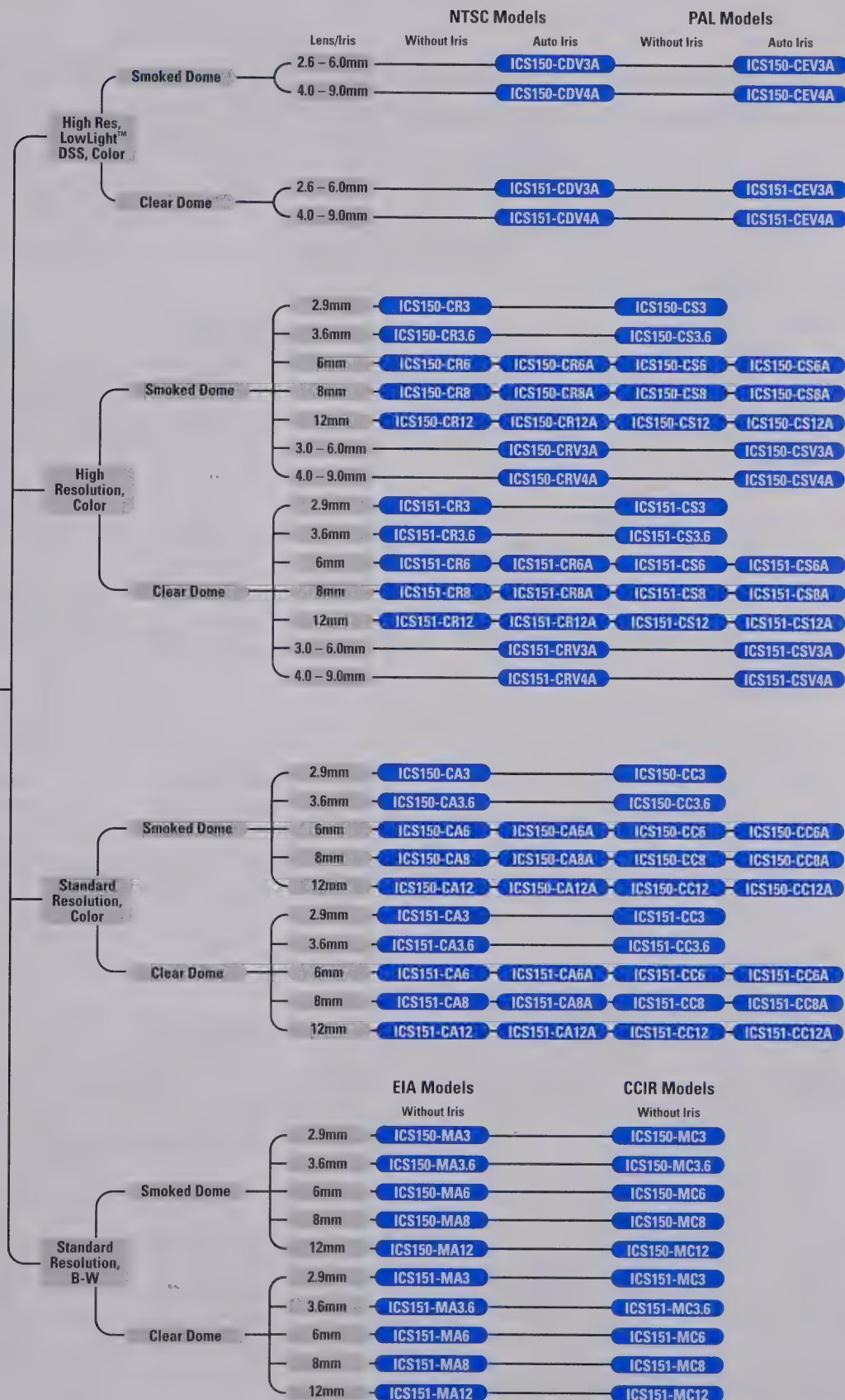


ICS100  
Surface Mount Dome



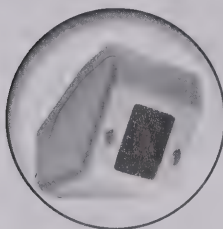


ICS150  
In-Ceiling Mount Dome





**ICS200**  
Wall/Ceiling/Corner Mount



	Lens/Iris	NTSC Models		PAL Models	
		Without Iris	Auto Iris	Without Iris	Auto Iris
High Resolution, Color	2.9mm	ICS200-CR3		ICS200-CS3	
	3.6mm	ICS200-CR3.6		ICS200-CS3.6	
	6mm	ICS200-CR6	ICS200-CR6A	ICS200-CS6	ICS200-CS6A
	8mm	ICS200-CR8	ICS200-CR8A	ICS200-CS8	ICS200-CS8A
	12mm	ICS200-CR12	ICS200-CR12A	ICS200-CS12	ICS200-CS12A
	3.0-6.0mm/auto iris		ICS200-CRV3A		ICS200-CSV3A
	4.0-9.0mm/auto iris		ICS200-CRV4A		ICS200-CSV4A
Standard Resolution, Color	2.9mm	ICS200-CA3		ICS200-CC3	
	3.6mm	ICS200-CA3.6		ICS200-CC3.6	
	6mm	ICS200-CA6	ICS200-CA6A	ICS200-CC6	ICS200-CC6A
	8mm	ICS200-CA8	ICS200-CA8A	ICS200-CC8	ICS200-CC8A
	12mm	ICS200-CA12	ICS200-CA12A	ICS200-CC12	ICS200-CC12A
Standard Resolution, B-W		EIA Models		CCIR Models	
		Without Iris		Without Iris	
	2.9mm	ICS200-MA3		ICS200-MC3	
	3.6mm	ICS200-MA3.6		ICS200-MC3.6	
	6mm	ICS200-MA6		ICS200-MC6	
	8mm	ICS200-MA8		ICS200-MC8	
	12mm	ICS200-MA12		ICS200-MC12	

**ICS300**  
Wall/Ceiling Mount



	Lens/Iris	NTSC Models		PAL Models	
		Without Iris	Auto Iris	Without Iris	Auto Iris
High Resolution, Color	2.9mm	ICS300-CR3		ICS300-CS3	
	3.6mm	ICS300-CR3.6		ICS300-CS3.6	
	6mm	ICS300-CR6	ICS300-CR6A	ICS300-CS6	ICS300-CS6A
	8mm	ICS300-CR8	ICS300-CR8A	ICS300-CS8	ICS300-CS8A
	12mm	ICS300-CR12	ICS300-CR12A	ICS300-CS12	ICS300-CS12A
	3.0-6.0mm/auto iris		ICS300-CRV3A		ICS300-CSV3A
	4.0-9.0mm/auto iris		ICS300-CRV4A		ICS300-CSV4A
Standard Resolution, Color	2.9mm	ICS300-CA3		ICS300-CC3	
	3.6mm	ICS300-CA3.6		ICS300-CC3.6	
	6mm	ICS300-CA6	ICS300-CA6A	ICS300-CC6	ICS300-CC6A
	8mm	ICS300-CA8	ICS300-CA8A	ICS300-CC8	ICS300-CC8A
	12mm	ICS300-CA12	ICS300-CA12A	ICS300-CC12	ICS300-CC12A
Standard Resolution, B-W		EIA Models		CCIR Models	
		Without Iris		Without Iris	
	2.9mm	ICS300-MA3		ICS300-MC3	
	3.6mm	ICS300-MA3.6		ICS300-MC3.6	
	6mm	ICS300-MA6		ICS300-MC6	
	8mm	ICS300-MA8		ICS300-MC8	
	12mm	ICS300-MA12		ICS300-MC12	

# SPECTRA III™

## FEATURE COMPARISON

### Spectra III

#### Camera / Optics

High resolution

Auto focus

AC line lock with adjustable phase and auto V-sync

16X optical, 8X digital, LowLight™ technology, color, .05 lux

#### Hardware

Integral, auto-sensing, multi-protocol receiver

5.9-inch acrylic bubble

Variable speed, 0.1-250 degrees per second

+/- 0.25 degree preset accuracy

360 degrees continuous rotation

Quick disconnect dome drive

(compatible with all older Spectra back boxes)

Auto-flip dome rotation

Indoor surface mount models

In-ceiling models meet NEMA Type 1 / IP40 standards

Standard pendant models meet NEMA Type 4X / IP66 standards

Environmental pendant models meet NEMA Type 4X / IP66 standards

In-ceiling environmental models meet NEMA Type 4X / IP66 standards

Advanced pendant lower dome seal with captivated screws

RJ-45 port for software upload and local control

Built-in surge protection

#### Software

40 presets with on-screen labels

Auto, frame, and random scan

Auto flip

Programmable power-up action mode

Programmable park

Multilanguage on-screen menus

Password protection

Proportional pan and tilt

One pattern of virtually unlimited length, includes preset calls

Zones (8) with on-screen labels

Zone video blanking

User-defined, on-screen label and indicator placement

On-screen compass and zoom readouts

On-screen system information

Remote reset and cycle power commands

Programmable zoom speeds

Digital position feedback for third-party controls

### Spectra III SE

#### Camera / Optics

High resolution

Auto focus

AC line lock with adjustable phase and auto V-sync

22X optical, 12X digital,  
LowLight™ technology,  
monochrome, ExViewHAD  
CCD, .005 lux

22X optical, 12X digital,  
LowLight™ technology,  
color, ExView HAD CCD,  
.02 lux

23X optical, 10X digital,  
LowLight™ technology,  
color/black-white,  
.013 lux,

80X wide dynamic range

Motion detection

#### Hardware

Integral, auto-sensing, multi-protocol receiver

5.9-inch acrylic bubble

Variable speed, 0.1 to 360 degrees per second

+/- 0.1 degree preset accuracy

360 degrees continuous rotation

Quick disconnect dome drive

(compatible with all older Spectra back boxes)

Auto-flip dome rotation

Indoor surface mount models

In-ceiling models meet NEMA Type 1 / IP40 standards

Standard pendant models meet NEMA Type 4X / IP66 standards

Environmental pendant models meet NEMA Type 4X / IP66 standards

In-ceiling environmental models meet NEMA Type 4X / IP66 standards

Advanced pendant lower dome seal with captivated screws

RJ-45 port for software upload and local control

Built-in surge protection

Alarm inputs (7), selectable between N/O and N/C

Programmable auxiliary outputs (2), expanded functions

Non-volatile back box memory stores all camera and site-specific dome settings

#### Software

80 presets with on-screen labels and custom camera settings for each preset

Auto, frame, and random scan

Auto flip

Programmable power-up action mode, including auto resume

Programmable park with multiple park actions

Multilanguage on-screen menus

Password protection

Proportional pan and tilt

Four patterns of virtually unlimited length, includes preset calls

Zones (8) with on-screen labels

Zone video blanking

User-defined, on-screen label and indicator placement

On-screen compass and zoom readouts

On-screen system information

Remote reset and cycle power commands

Programmable zoom speeds

Digital position feedback for third-party controls

Horizontal video blanking

Dynamic window blanking with user-defined four-sided shapes

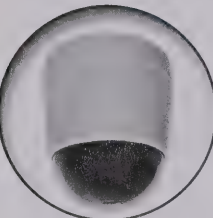

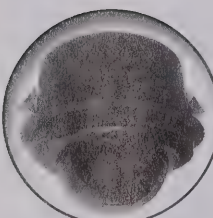
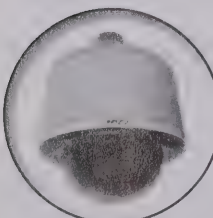

Window blanking on/off based on zoom ratio

Indoor/outdoor selectable camera preferences

Programmable alarm action with three priority levels

Programmable freeze frame between presets

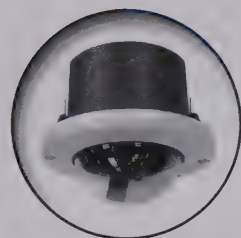


Mount	Finish	Dome Color	SPECTRA III™		SPECTRA III™ SE		
			16X Zoom LowLight™ Color	22X EXview LowLight™ Monochrome	22X EXview LowLight™ Color	23X LowLight™ Color/Black-White	
  Indoor	Surface Mount	White	Smoked	SD53TC-SMW-0	SD53M22-SMW-0	SD53C22-SMW-0	SD53CBW-SMW-0
			Clear	SD53TC-SMW-1	SD53M22-SMW-1	SD53C22-SMW-1	SD53CBW-SMW-1
			Chrome	SD53TC-SMW-2	SD53M22-SMW-2	SD53C22-SMW-2	SD53CBW-SMW-2
			Gold	SD53TC-SMW-3	SD53M22-SMW-3	SD53C22-SMW-3	SD53CBW-SMW-3
		Black	Smoked	SD53TC-SMB-0	SD53M22-SMB-0	SD53C22-SMB-0	SD53CBW-SMB-0
			Clear	SD53TC-SMB-1	SD53M22-SMB-1	SD53C22-SMB-1	SD53CBW-SMB-1
			Chrome	SD53TC-SMB-2	SD53M22-SMB-2	SD53C22-SMB-2	SD53CBW-SMB-2
			Gold	SD53TC-SMB-3	SD53M22-SMB-3	SD53C22-SMB-3	SD53CBW-SMB-3
	In-Ceiling	White	Smoked	SD53TC-F0	SD53M22-F0	SD53C22-F0	SD53CBW-F0
			Clear	SD53TC-F1	SD53M22-F1	SD53C22-F1	SD53CBW-F1
Chrome			SD53TC-F2	SD53M22-F2	SD53C22-F2	SD53CBW-F2	
Gold			SD53TC-F3	SD53M22-F3	SD53C22-F3	SD53CBW-F3	
   Indoor/Outdoor	Environmental In-Ceiling	Black	Smoked	SD53TC-F-E0	SD53M22-F-E0	SD53C22-F-E0	SD53CBW-F-E0
			Clear	SD53TC-F-E1	SD53M22-F-E1	SD53C22-F-E1	SD53CBW-F-E1
	Standard Pendant	Light Gray	Smoked	SD53TC-PG-0	SD53M22-PG-0	SD53C22-PG-0	SD53CBW-PG-0
			Clear	SD53TC-PG-1	SD53M22-PG-1	SD53C22-PG-1	SD53CBW-PG-1
			Chrome	SD53TC-PG-2	SD53M22-PG-2	SD53C22-PG-2	SD53CBW-PG-2
			Gold	SD53TC-PG-3	SD53M22-PG-3	SD53C22-PG-3	SD53CBW-PG-3
		Black	Smoked	SD53TC-PB-0	SD53M22-PB-0	SD53C22-PB-0	SD53CBW-PB-0
			Clear	SD53TC-PB-1	SD53M22-PB-1	SD53C22-PB-1	SD53CBW-PB-1
			Chrome	SD53TC-PB-2	SD53M22-PB-2	SD53C22-PB-2	SD53CBW-PB-2
			Gold	SD53TC-PB-3	SD53M22-PB-3	SD53C22-PB-3	SD53CBW-PB-3
Environmental Pendant	Light Gray	Smoked	SD53TC-PG-E0	SD53M22-PG-E0	SD53C22-PG-E0	SD53CBW-PG-E0	
		Clear	SD53TC-PG-E1	SD53M22-PG-E1	SD53C22-PG-E1	SD53CBW-PG-E1	

Note: For PAL and CCIR models add "-X" suffix to model number.  
Examples: SD53C22-SMW-0-X (PAL)

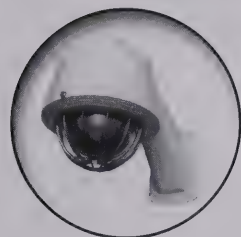
Note: For PAL and CCIR models add "-X" suffix to model number.  
 Examples: SD53C22-SMW-0-X (PAL)  
 SD53M22-PG-0-X (CCIR)

# Spectra III™ Heavy Duty Selection Guide



In-Ceiling\*

	SPECTRA III™ 16X Zoom LowLight™ Color	SPECTRA III™ SE 22X EXview LowLight™ Monochrome	SPECTRA III™ SE 22X EXview LowLight™ Color	SPECTRA III™ SE 23X LowLight™ Color/ Black-White
Without Cage	SD53TC-HF1	SD53M22-HF1	SD53C22-HF1	SD53CBW-HF1
With Cage	SD53TC-HCF1	SD53M22-HCF1	SD53C22-HCF1	SD53CBW-HCF1



Pendant\*

Environmental\*

	SPECTRA III™ 16X Zoom LowLight™ Color	SPECTRA III™ SE 22X EXview LowLight™ Monochrome	SPECTRA III™ SE 22X EXview LowLight™ Color	SPECTRA III™ SE 23X LowLight™ Color/ Black-White
Without Cage	SD53TC-HP1	SD53M22-HP1	SD53C22-HP1	SD53CBW-HP1
With Cage	SD53TC-HCP1	SD53M22-HCP1	SD53C22-HCP1	SD53CBW-HCP1
Without Cage	SD53TC-HPE1	SD53M22-HPE1	SD53C22-HPE1	SD53CBW-HPE1
With Cage	SD53TC-HCPE1	SD53M22-HCPE1	SD53C22-HCPE1	SD53CBW-HCPE1

\*Spectra heavy duty models available with clear bubble only.  
Note: Environmental pendant model shown with IWM-GY mount (not included).

# Spectra III™ Stainless Steel Selection Guide



Environmental  
Pendant

	SPECTRA III™ 16X Zoom LowLight™ Color	SPECTRA III™ SE 22X EXview LowLight™ Monochrome	SPECTRA III™ SE 22X EXview LowLight™ Color	SPECTRA III™ SE 23X LowLight™ Color/ Black-White
Smoked	SD53TC-PSGE0	SD53M22-PSGE0	SD53C22-PSGE0	SD53CBW-PSGE0
Clear	SD53TC-PSGE1	SD53M22-PSGE1	SD53C22-PSGE1	SD53CBW-PSGE1

Note: Environmental pendant models shown with IDM4012SS mount (not included).

# Spectra III™ Pressurized Selection Guide



Environmental  
Pendant

Environmental Pendant,  
Single-Mode  
Fiber Optic Feedthrough

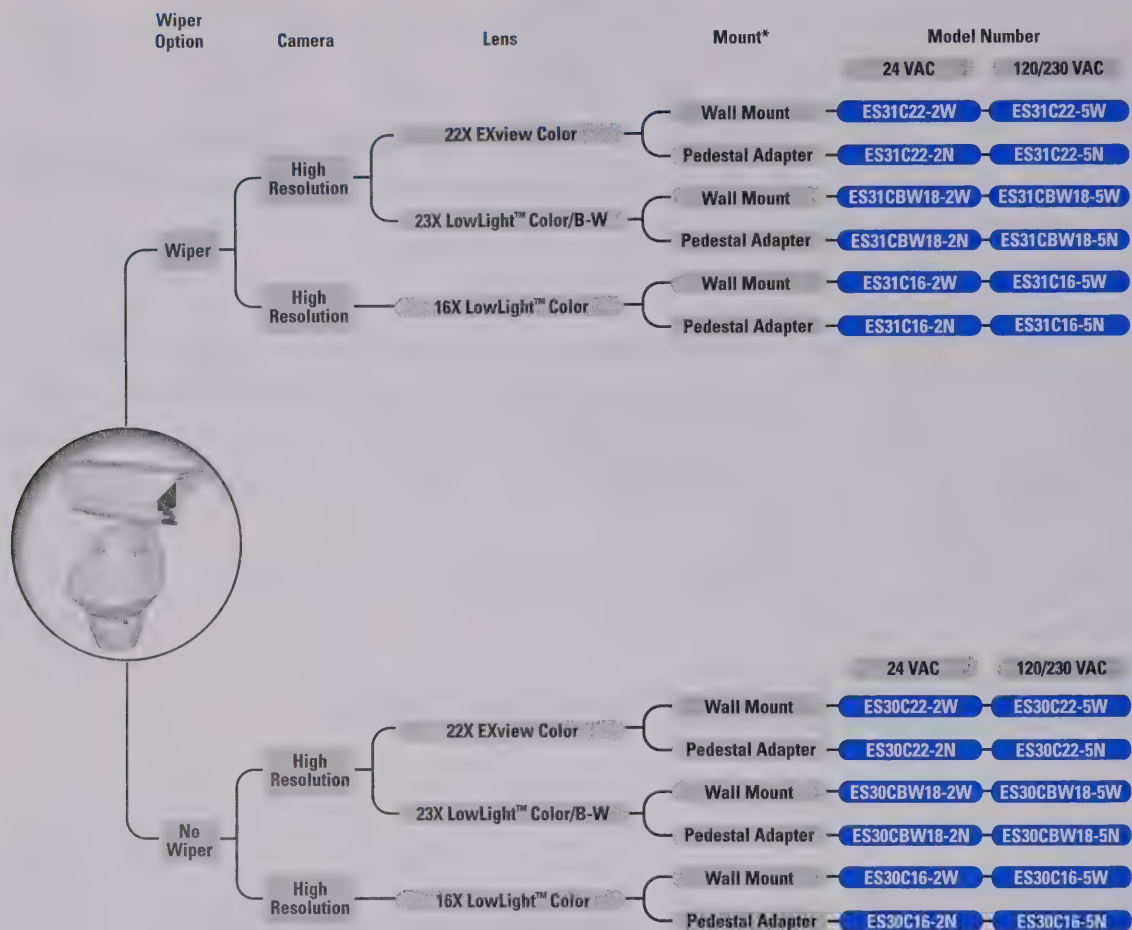
Environmental Pendant,  
Multimode  
Fiber Optic Feedthrough

	SPECTRA III™ 16X Zoom LowLight™ Color	SPECTRA III™ SE 22X EXview LowLight™ Monochrome	SPECTRA III™ SE 22X EXview LowLight™ Color	SPECTRA III™ SE 23X LowLight™ Color/ Black-White
Smoked	SD53TC-PRE0	SD53M22-PRE0	SD53C22-PRE0	SD53CBW-PRE0
Clear	SD53TC-PRE1	SD53M22-PRE1	SD53C22-PRE1	SD53CBW-PRE1
Smoked	SD53TC-PRSE0	SD53M22-PRSE0	SD53C22-PRSE0	SD53CBW-PRSE0
Clear	SD53TC-PRSE1	SD53M22-PRSE1	SD53C22-PRSE1	SD53CBW-PRSE1
Smoked	SD53TC-PRME0	SD53M22-PRME0	SD53C22-PRME0	SD53CBW-PRME0
Clear	SD53TC-PRME1	SD53M22-PRME1	SD53C22-PRME1	SD53CBW-PRME1

Note: For PAL and CCIR models add "-X" to model number.  
Examples: SD53TC-HP1-X (PAL)  
SD53C22-PRSE1-X (CCIR)

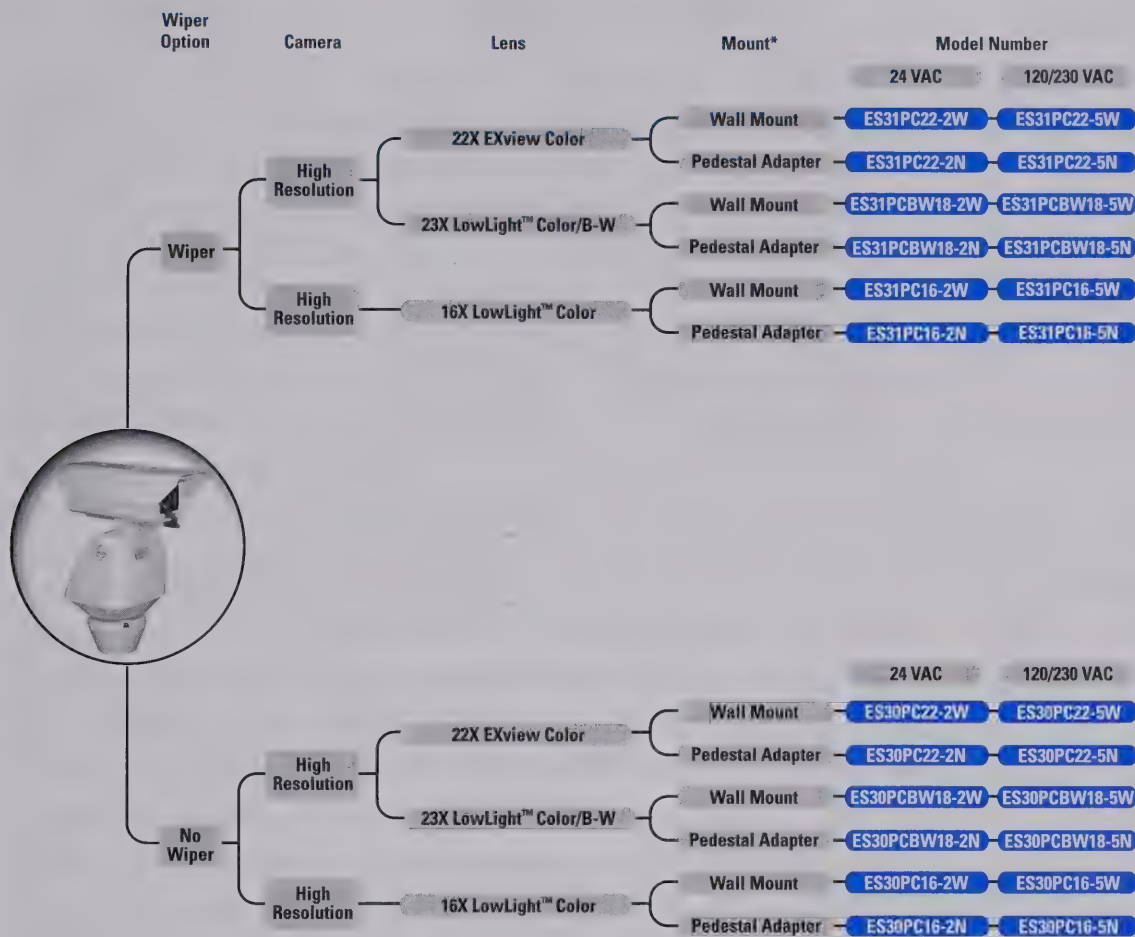


# Esprit® with IOP Camera Selection Guide



\*Includes either EWM wall mount or EPP pedestal adapter.

Note: All models shown are NTSC format.  
For all PAL format add "-X" to end of model number;  
for example ES31C22-5W-X.



\*Includes either EWM wall mount or EPP pedestal adapter.

Note: All models shown are NTSC format.  
For all PAL format add "-X" to end of model number;  
for example ES31PC22-5W-X.



Camera Type	Lens*	Wall Mount (EWM)		Pedestal Adapter (EPP)	
		NTSC	PAL	NTSC	PAL
High Res LowLight™ CC3751H-2/ CC3651H-2X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5CLZ10PW	ES3012-5CMZ10PW	ES3012-5CLZ10PN	ES3012-5CMZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5CLZ10W	ES3012-5CMZ10W	ES3012-5CLZ10N	ES3012-5CMZ10N
	(18X) 11-200 mm Auto-Iris, w/PP	ES3012-5CLZ18PW	ES3012-5CMZ18PW	ES3012-5CLZ18PN	ES3012-5CMZ18PN
	(18X) 11-200 mm Auto-Iris	ES3012-5CLZ18W	ES3012-5CMZ18W	ES3012-5CLZ18N	ES3012-5CMZ18N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5CLZ20PW	ES3012-5CMZ20PW	ES3012-5CLZ20PN	ES3012-5CMZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5CLZ20W	ES3012-5CMZ20W	ES3012-5CLZ20N	ES3012-5CMZ20N
	(30X) 5.5-165 mm Auto-Iris, w/PP	ES3012-5CLZ30PW	ES3012-5CMZ30PW	ES3012-5CLZ30PN	ES3012-5CMZ30PN
	(30X) 5.5-165 mm Auto-Iris	ES3012-5CLZ30W	ES3012-5CMZ30W	ES3012-5CLZ30N	ES3012-5CMZ30N
High Res EDR CC3701H-2/ CC3701H-2X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5CBZ10PW	ES3012-5CDZ10PW	ES3012-5CBZ10PN	ES3012-5CDZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5CBZ10W	ES3012-5CDZ10W	ES3012-5CBZ10N	ES3012-5CDZ10N
	(18X) 11-200 mm Auto-Iris, w/PP	ES3012-5CBZ18PW	ES3012-5CDZ18PW	ES3012-5CBZ18PN	ES3012-5CDZ18PN
	(18X) 11-200 mm Auto-Iris	ES3012-5CBZ18W	ES3012-5CDZ18W	ES3012-5CBZ18N	ES3012-5CDZ18N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5CBZ20PW	ES3012-5CDZ20PW	ES3012-5CBZ20PN	ES3012-5CDZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5CBZ20W	ES3012-5CDZ20W	ES3012-5CBZ20N	ES3012-5CDZ20N
	(30X) 5.5-165 mm Auto-Iris, w/PP	ES3012-5CBZ30PW	ES3012-5CDZ30PW	ES3012-5CBZ30PN	ES3012-5CDZ30PN
	(30X) 5.5-165 mm Auto-Iris	ES3012-5CBZ30W	ES3012-5CDZ30W	ES3012-5CBZ30N	ES3012-5CDZ30N
High Res Day/Night CC3770H-6/ CC3770H-6X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5DAZ10PW	ES3012-5DBZ10PW	ES3012-5DAZ10PN	ES3012-5DBZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5DAZ10W	ES3012-5DBZ10W	ES3012-5DAZ10N	ES3012-5DBZ10N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5DAZ20PW	ES3012-5DBZ20PW	ES3012-5DAZ20PN	ES3012-5DBZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5DAZ20W	ES3012-5DBZ20W	ES3012-5DAZ20N	ES3012-5DBZ20N
High Resolution CC3710H-6/ CC3710H-6X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5CHZ10PW	ES3012-5CKZ10PW	ES3012-5CHZ10PN	ES3012-5CKZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5CHZ10W	ES3012-5CKZ10W	ES3012-5CHZ10N	ES3012-5CKZ10N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5CHZ20PW	ES3012-5CKZ20PW	ES3012-5CHZ20PN	ES3012-5CKZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5CHZ20W	ES3012-5CKZ20W	ES3012-5CHZ20N	ES3012-5CKZ20N
No Camera/Lens		ES3012-5W	ES3012-5W	ES3012-5N	ES3012-5N

\*w/PP = Lens with preset positioning

Note: Part numbers in this selection guide are based on using an EH3012-5 enclosure with 115/230 VAC input. To substitute an enclosure with 24 VAC input change the enclosure part number to ES3012-2.

Example: ES3012-2CLZ10W

For detailed information about Esprit ImagePak camera and lens components, refer to the pages referenced below.

Enclosure	See Page	Cameras	See Page	Lenses	See Page
Esprit ES3012 Series	75	CC3701H-2 (CB)	95	10X = 13ZD6X10 (Z10)	143
		CC3701H-2X (CD)	95	13ZD6X10P (Z10P)	143
		CC3710H-6 (CH)	99	18X = 12ZV11X18 (Z18)	145
		CC3710H-6X (CK)	99	12ZV11X18P (Z18P)	145
		CC3751H-2 (CL)	97	20X = 13ZD5.6X20 (Z20)	143
		CC3651H-2X (CM)	97	13ZD5.6X20P (Z20P)	143
		CC3770H-6 (DA)	103	30X = 13ZD5.5X30 (Z30)	143
		CC3770H-6X (DB)	103	13ZD5.5X30P (Z30P)	143
Mount					
EWM (Wall)	297				
EPP (Pedestal)	297				

Camera Type	Lens*	Wall Mount (EWM)		Pedestal Adapter (EPP)	
		EIA	CCIR	EIA	CCIR
High Res EXview HAD™ LowLight™ MC3651H-2/ MC3651H-2X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5MLZ10PW	ES3012-5MMZ10PW	ES3012-5MLZ10PN	ES3012-5MMZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5MLZ10W	ES3012-5MMZ10W	ES3012-5MLZ10N	ES3012-5MMZ10N
	(18X) 11-200 mm Auto-Iris, w/PP	ES3012-5MLZ18PW	ES3012-5MMZ18PW	ES3012-5MLZ18PN	ES3012-5MMZ18PN
	(18X) 11-200 mm Auto-Iris	ES3012-5MLZ18W	ES3012-5MMZ18W	ES3012-5MLZ18N	ES3012-5MMZ18N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5MLZ20PW	ES3012-5MMZ20PW	ES3012-5MLZ20PN	ES3012-5MMZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5MLZ20W	ES3012-5MMZ20W	ES3012-5MLZ20N	ES3012-5MMZ20N
	(30X) 5.5-165 mm Auto-Iris, w/PP	ES3012-5MLZ30PW	ES3012-5MMZ30PW	ES3012-5MLZ30PN	ES3012-5MMZ30PN
	(30X) 5.5-165 mm Auto-Iris	ES3012-5MLZ30W	ES3012-5MMZ30W	ES3012-5MLZ30N	ES3012-5MMZ30N
High Res EXview HAD™ MC3610H-6/ MC3610H-6X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5MHZ10PW	ES3012-5MEZ10PW	ES3012-5MHZ10PN	ES3012-5MEZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5MHZ10W	ES3012-5MEZ10W	ES3012-5MHZ10N	ES3012-5MEZ10N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5MHZ20PW	ES3012-5MEZ20PW	ES3012-5MHZ20PN	ES3012-5MEZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5MHZ20W	ES3012-5MEZ20W	ES3012-5MHZ20N	ES3012-5MEZ20N
High Resolution MC3710H-2/ MC3710H-2X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5MFZ10PW	ES3012-5MKZ10PW	ES3012-5MFZ10PN	ES3012-5MKZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5MFZ10W	ES3012-5MKZ10W	ES3012-5MFZ10N	ES3012-5MKZ10N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5MFZ20PW	ES3012-5MKZ20PW	ES3012-5MFZ20PN	ES3012-5MKZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5MFZ20W	ES3012-5MKZ20W	ES3012-5MFZ20N	ES3012-5MKZ20N
Standard Resolution MC3710S-6/ MC3710S-6X	(10X) 6-60 mm Auto-Iris, w/PP	ES3012-5MGZ10PW	ES3012-5MJZ10PW	ES3012-5MGZ10PN	ES3012-5MJZ10PN
	(10X) 6-60 mm Auto-Iris	ES3012-5MGZ10W	ES3012-5MJZ10W	ES3012-5MGZ10N	ES3012-5MJZ10N
	(20X) 5.6-112 mm Auto-Iris, w/PP	ES3012-5MGZ20PW	ES3012-5MJZ20PW	ES3012-5MGZ20PN	ES3012-5MJZ20PN
	(20X) 5.6-112 mm Auto-Iris	ES3012-5MGZ20W	ES3012-5MJZ20W	ES3012-5MGZ20N	ES3012-5MJZ20N
No Camera/Lens		ES3012-5W	ES3012-5W	ES3012-5N	ES3012-5N

\*w/PP = Lens with preset positioning

Note: Part numbers in this selection guide are based on using an EH3012-5 enclosure with 115/230 VAC input. To substitute an enclosure with 24 VAC input change the enclosure part number to ES3012-2.

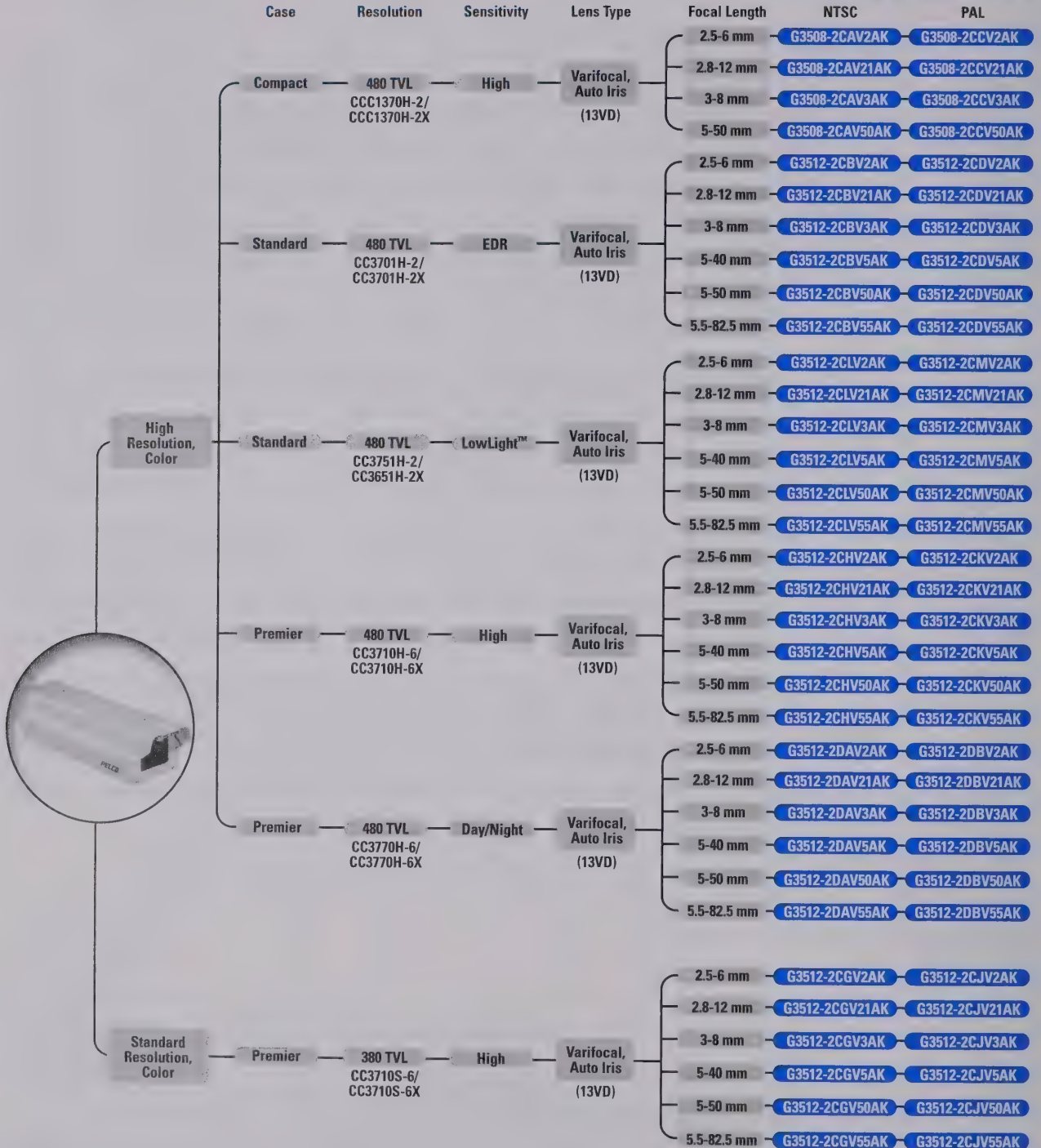
Example: ES3012-2MLZ10W

For detailed information about Esprit ImagePak camera and lens components, refer to the pages referenced below.

Enclosure	See Page	Cameras	See Page	Lenses	See Page
Esprit ES3012 Series	75	MC3610H-6 (MH)	117	10X = 13ZD6X10 (Z10)	143
		MC3610H-6X (ME)	117	13ZD6X10P (Z10P)	143
		MC3651H-2 (ML)	113	18X = 12ZV11X18 (Z18)	145
		MC3651H-2X (MM)	113	12ZV11X18P (Z18P)	145
		MC3710H-6 (MF)	115	20X = 13ZD5.6X20 (Z20)	143
		MC3710H-6X (MK)	115	13ZD5.6X20P (Z20P)	143
		MC3710S-6 (MG)	121	30X = 13ZD5.5X30 (Z30)	143
		MC3710S-6X (MJ)	121	13ZD5.5X30P (Z30P)	143
Mount					
EWM (Wall)	297				
EPP (Pedestal)	297				

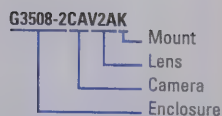


Outdoor (Down to -10°F)  
Includes 24 VAC Heater, Sunshield and Mount



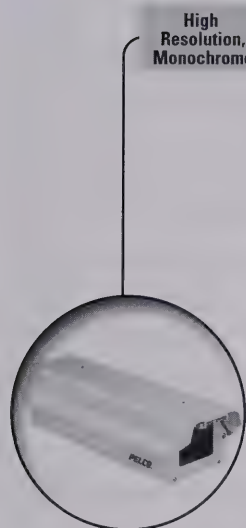
Note: Consult the factory or B.O.S.S. for additional ImagePak combinations not shown in this selection guide.

For detailed information about EH3500 Series ImagePak components, refer to the pages referenced below.



Enclosure	See Page	Cameras	See Page	See Page	Lenses	See Page
EH3508-2	171	CC3701H-2 (CB)	95	CC3751H-2 (CL)	V2A = 13VD2.5-6	133
EH3512-2	173	CC3701H-2X (CD)	95	CC3651H-2X (CM)	V21A = 13VD2.8-12	133
		CC3710H-6 (CH)	99	CC3770H-6 (DA)	V3A = 13VD3-8	133
		CC3710H-6X (CK)	99	CC3770H-6X (DB)	V5A = 13VD5-40	133
		CC3710S-6 (CG)	109	CCC1370H-2 (CA)	V50A = 13VD5-50	133
		CC3710S-6X (CJ)	109	CCC1370H-2X (CC)	V55A = 13VD5.5-82.5	133
Mount						
EM1450	263					

Outdoor (Down to -10°F)  
Includes 24 VAC Heater, Sunshield and Mount



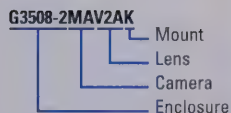
High  
Resolution,  
Monochrome

Standard  
Resolution,  
Monochrome

Case	Resolution	Sensitivity	Lens Type	Focal Length	EIA	CCIR
Compact	560 TVL MCC1370H-2	High	Varifocal, Auto Iris (13VD)	2.5-6 mm	G3508-2MAV2AK	Not available
				2.8-12 mm	G3508-2MAV21AK	Not available
				3-8 mm	G3508-2MAV3AK	Not available
				5-50 mm	G3508-2MAV50AK	Not available
Standard	570 TVL MC3651H-2/ MC3651H-2X	LowLight™ EXview HAD™	Varifocal, Auto Iris (13VD)	2.5-6 mm	G3512-2MLV2AK	G3512-2MMV2AK
				2.8-12 mm	G3512-2MLV21AK	G3512-2MMV21AK
				3-8 mm	G3512-2MLV3AK	G3512-2MMV3AK
				5-40 mm	G3512-2MLV5AK	G3512-2MMV5AK
				5-50 mm	G3512-2MLV50AK	G3512-2MMV50AK
				5.5-82.5 mm	G3512-2MLV55AK	G3512-2MMV55AK
Premier	570 TVL MC3710H-6/ MC3710H-6X	High	Varifocal, Auto Iris (13VD)	2.5-6 mm	G3512-2MFV2AK	G3512-2MKV2AK
				2.8-12 mm	G3512-2MFV21AK	G3512-2MKV21AK
				3-8 mm	G3512-2MFV3AK	G3512-2MKV3AK
				5-40 mm	G3512-2MFV5AK	G3512-2MKV5AK
				5-50 mm	G3512-2MFV50AK	G3512-2MKV50AK
				5.5-82.5 mm	G3512-2MFV55AK	G3512-2MKV55AK
Premier	570 TVL MC3610H-6/ MC3610H-6X	EXview HAD™	Varifocal, Auto Iris (13VD)	2.5-6 mm	G3512-2MHV2AK	G3512-2MEV2AK
				2.8-12 mm	G3512-2MHV21AK	G3512-2MEV21AK
				3-8 mm	G3512-2MHV3AK	G3512-2MEV3AK
				5-40 mm	G3512-2MHV5AK	G3512-2MEV5AK
				5-50 mm	G3512-2MHV50AK	G3512-2MEV50AK
				5.5-82.5 mm	G3512-2MHV55AK	G3512-2MEV55AK
Premier	380 TVL MC3710S-6/ MC3710S-6X	High	Varifocal, Auto Iris (13VD)	2.5-6 mm	G3512-2MGV2AK	G3512-2MJV2AK
				2.8-12 mm	G3512-2MGV21AK	G3512-2MJV21AK
				3-8 mm	G3512-2MGV3AK	G3512-2MJV3AK
				5-40 mm	G3512-2MGV5AK	G3512-2MJV5AK
				5-50 mm	G3512-2MGV50AK	G3512-2MJV50AK
				5.5-82.5 mm	G3512-2MGV55AK	G3512-2MJV55AK

Note: Consult the factory or B.O.S.S. for additional ImagePak combinations not shown in this selection guide.

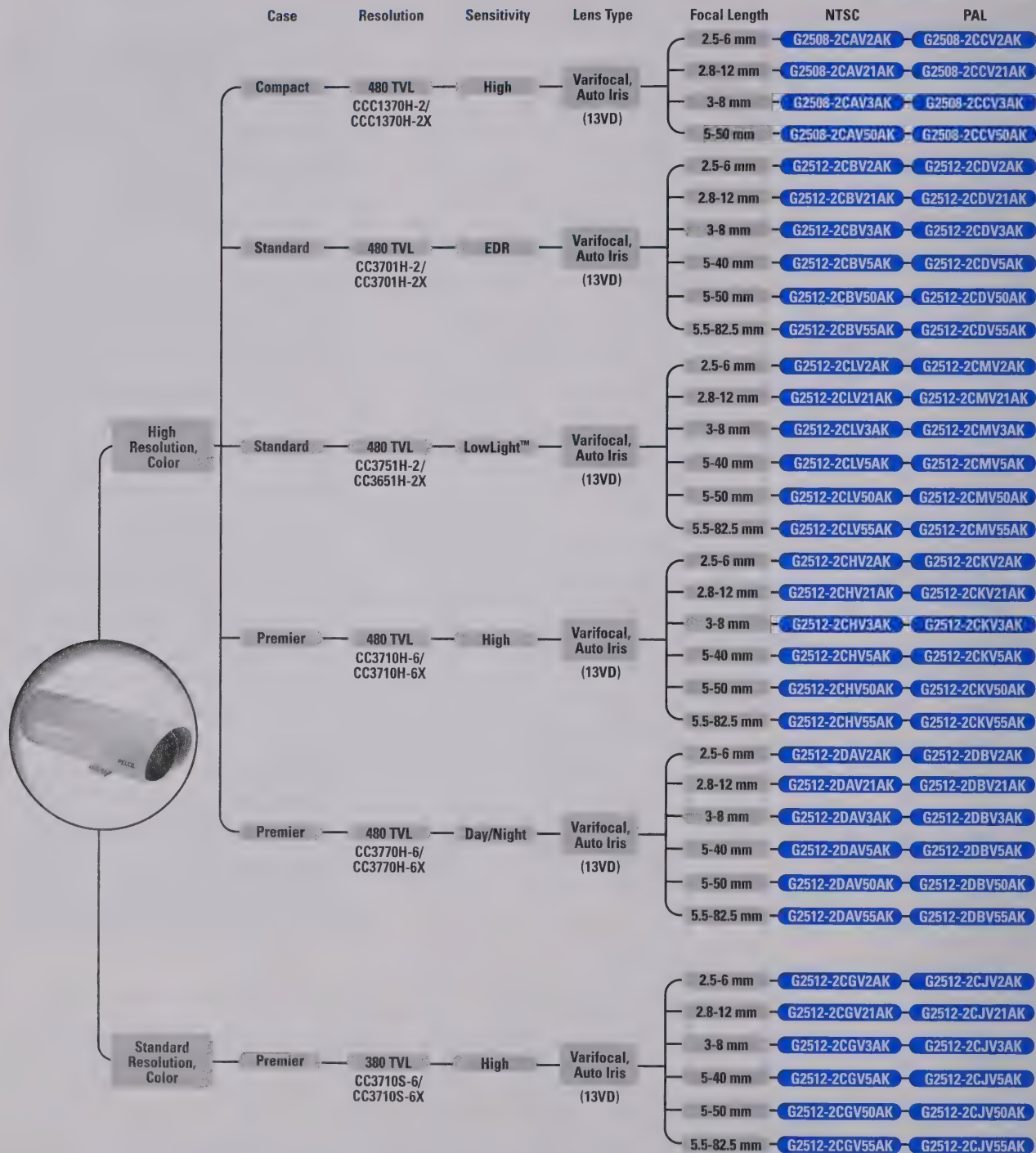
For detailed information about EH3500 Series ImagePak components, refer to the pages referenced below.



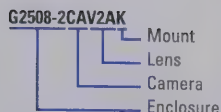
Enclosure	See Page	Cameras	See Page	See Page	Lenses	See Page
EH3508-2	171	MC3610H-2 (MB)	117	MC3710S-6 (MG)	V2A = 13VD2.5-6	133
EH3512-2	173	MC3610H-2X (MD)	117	MC3710S-6X (MJ)	V21A = 13VD2.8-12	133
		MC3651H-2 (ML)	113	MCC1370H-2 (MA)	V3A = 13VD3-8	133
		MC3651H-2X (MM)	113		V5A = 13VD5-40	133
		MC3710H-6 (MF)	115		V50A = 13VD5-50	133
		MC3710H-6X (MK)	115		V55A = 13VD5.5-82.5	133
Mount						
EM1450	263					



Outdoor (Down to -10°F)  
Includes 24 VAC Heater, Sunshield and Mount

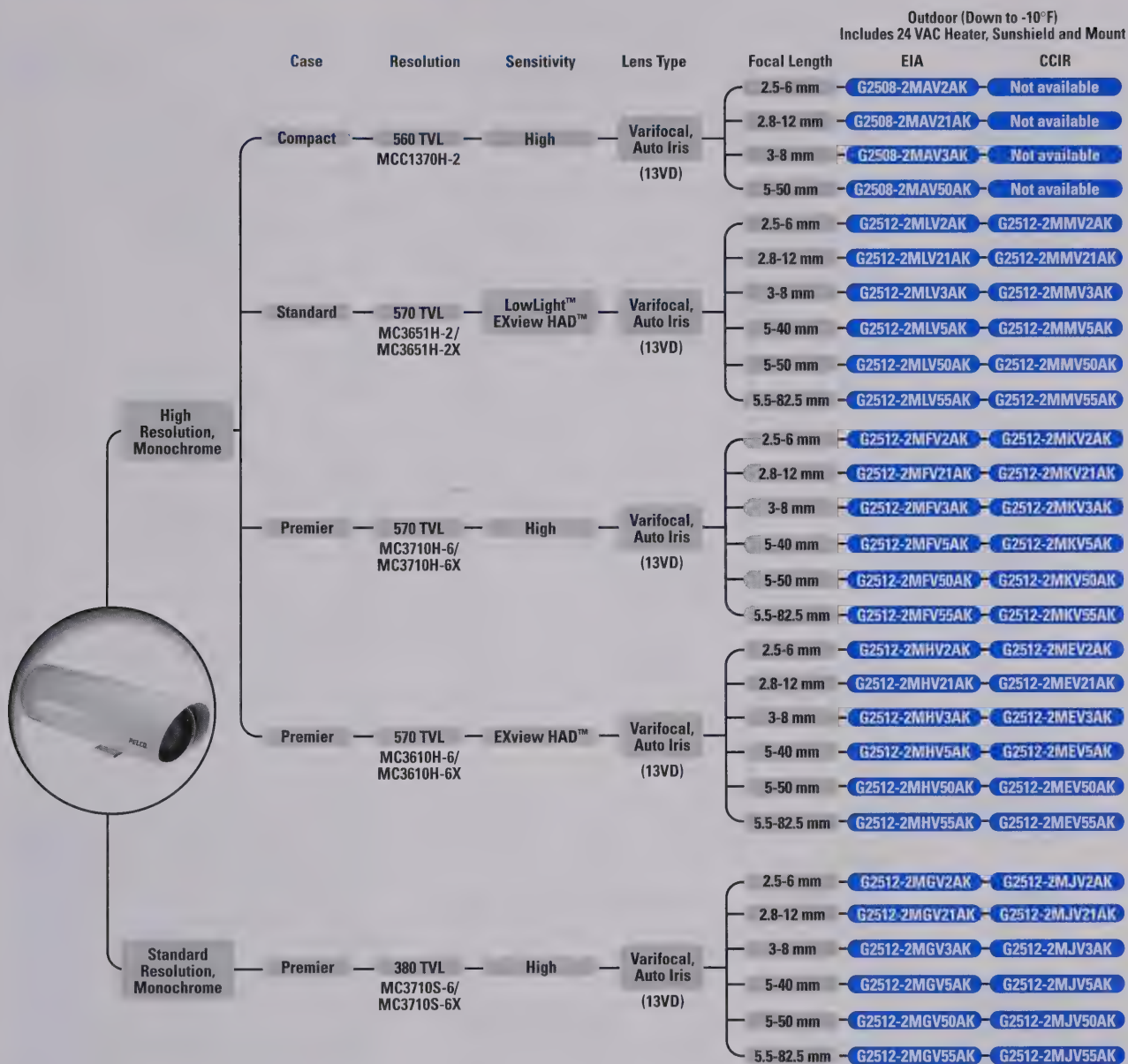


Note: Consult the factory or B.O.S.S. for additional ImagePak combinations not shown in this selection guide.



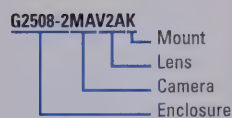
For detailed information about EH2500 Series ImagePak components, refer to the pages referenced below.

Enclosure	See Page	Cameras	See Page	See Page	Lenses	See Page
EH2508-2,		CC3701H-2 (CB)	95	CC3751H-2 (CL)	V2A = 13VD2.5-6	133
EH2512-2	169	CC3701H-2X (CD)	95	CC3651H-2X (CM)	V21A = 13VD2.8-12	133
		CC3710H-6 (CH)	99	CC3770H-6 (DA)	V3A = 13VD3-8	133
		CC3710H-6X (CK)	99	CC3770H-6X (DB)	V5A = 13VD5-40	133
		CC3710S-6 (CG)	109	CCC1370H-2 (CA)	V50A = 13VD5-50	133
		CC3710S-6X (CJ)	109	CCC1370H-2X (CC)	V55A = 13VD5.5-82.5	133
Mount						
EWM1450	263					



Note: Consult the factory or B.O.S.S. for additional ImagePak combinations not shown in this selection guide.

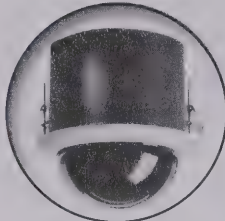
For detailed information about EH2500 Series ImagePak components, refer to the pages referenced below.



Enclosure	See Page	Cameras	See Page	Cameras	See Page	Lenses	See Page
EH2508-2,		MC3610H-2 (MH)	117	MC3710S-6 (MG)	121	V2A = 13VD2.5-6	133
EH2512-2	169	MC3610H-2X (ME)	117	MC3710S-6X (MJ)	121	V21A = 13VD2.8-12	133
		MC3651H-2 (ML)	113	MCC1370H-2 (MA)	111	V3A = 13VD3-8	133
		MC3651H-2X (MM)	113			V5A = 13VD5-40	133
		MC3710H-6 (MF)	115			V50A = 13VD5-50	133
		MC3710H-6X (MK)	115			V55A = 13VD5.5-82.5	133
Mount							
EM1450	263						



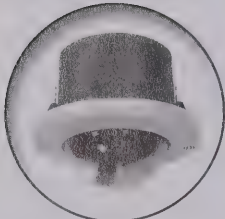
The DF5 Series is available with predetermined, factory-installed and back-focused camera and lens packages. To configure a dome with integrated camera and lens or integrated camera only, refer to the selection guides below to compile the appropriate model number.



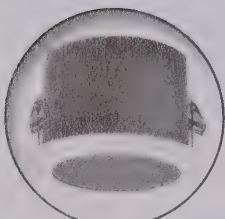
DF5 Series  
In-Ceiling



DF5 Series  
Pendant



DF5HD-1 Dome



DF5-0F Dome



DF5S Series

## Standard In-Ceiling and Pendant Models

DF5CA-PB-02.3A

- DF5** Standard DF5
- DH5** Heavy duty DF5
- CA** = Color, NTSC, high resolution, 24 VAC
- CC** = Color, PAL, high resolution, 24 VAC
- MA** = Monochrome, EIA, high resolution, 24 VAC
- PB** = Pendant, black\* (indoor)
- PG** = Pendant, light gray (indoor/outdoor)
- Blank** = In-ceiling back box
- 0** = Smoked dome (1/2 f-stop light loss)\*
- 1** = Clear dome
- 2** = Chrome dome (2 f-stops light loss)\*
- 3** = Gold dome (2 f-stops light loss)\*
- E0** = Outdoor pendant (includes heater and sun shield), smoked dome (1/2 f-stop of light loss)\*
- E1** = Outdoor pendant (includes heater and sun shield), clear dome
- 2.3** = 2.3 mm lens
- 2.8** = 2.8 mm lens
- 4** = 4 mm lens
- 8** = 8 mm lens
- V2** = 2.5-6 mm varifocal lens
- V21** = 2.8-12 mm varifocal lens
- V3** = 3-8 mm varifocal lens
- V5** = 5-40 mm varifocal lens
- V50** = 5-50 mm varifocal lens
- Blank** = No lens
- A** = Auto iris
- Blank** = Manual iris

\*Not available in heavy duty models.

## In-Ceiling Models with Flat Acrylic Plate

DF5CA-0F2.3A

- DF5** Series dome
- CA** = Color, NTSC, high resolution, 24 VAC
- CC** = Color, PAL, high resolution, 24 VAC
- MA** = Monochrome, EIA, high resolution, 24 VAC
- 0F** = Smoked flat window (1/2 f-stop light loss)
- 1F** = Clear flat window
- 2.3** = 2.3 mm lens
- 2.8** = 2.8 mm lens
- 4** = 4 mm lens
- Blank** = No lens
- A** = Auto iris
- Blank** = Manual iris

## In-Ceiling Models with Shortened Back Box

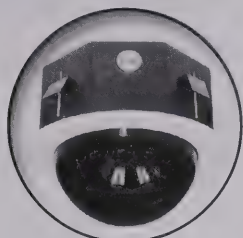
DF5SCA-02.3A

- DF5S** Series dome
- CA** = Color, NTSC, high resolution, 24 VAC
- CC** = Color, PAL, high resolution, 24 VAC
- MA** = Monochrome, EIA, high resolution, 24 VAC
- 0** = Smoked dome (1/2 f-stop light loss)
- 1** = Clear dome
- 2** = Chrome dome (2 f-stops light loss)
- 3** = Gold dome (2 f-stops light loss)
- 2.3** = 2.3 mm lens
- 2.8** = 2.8 mm lens
- 4** = 4 mm lens
- 8** = 8 mm lens
- V2** = 2.5-6 mm varifocal lens
- V21** = 2.8-12 mm varifocal lens
- V3** = 3-8 mm varifocal lens
- V5** = 5-40 mm varifocal lens
- V50** = 5-50 mm varifocal lens
- Blank** = No lens
- A** = Auto iris
- Blank** = Manual iris

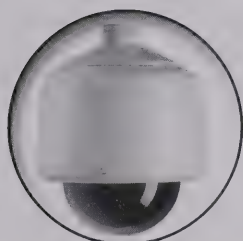
For detailed information about DF5 DomePak camera and lens components, refer to the pages referenced below.

Dome		See Page
DF5 Series Fixed Mount Dome		205
Cameras		
Color	CA = CCC1370H-2 (NTSC)	93
	CC = CCC1370H-2X (PAL)	93
Monochrome	MA = MCC1370H-2 (EIA)	111
Lenses		
Manual Iris	2.3 = 13FA2.3	125
	2.8 = 13FA2.8	125
	4 = 13FA4	125
	8 = 13FA8	125
	V2 = 13VA2.5-6	131
	V21 = 13VA2.8-12	131
	V3 = 13VA3-8	131
	V5 = 13VA5-40	131
	V50 = 13VA5-50	131
	V50 = 13VA5-50	131
Auto Iris	2.3 = 13FD2.3	129
	2.8 = 13FD2.8	129
	4 = 13FD4	129
	8 = 13FD8	129
	V2 = 13VD2.5-6	133
	V21 = 13VD2.8-12	133
	V3 = 13VD3-8	133
	V5 = 13VD5-40	133
	V50 = 13VD5-50	133
	V50 = 13VD5-50	133

The DF8 Series is available with predetermined, factory-installed and back focused camera and lens packages. To configure a dome with integrated camera and lens or integrated camera only, refer to the selection guide below to compile the appropriate model number.



DF8A In-Ceiling Dome



DF8 Pendant

For detailed information about DF8 DomePak camera and lens components, refer to the pages referenced below.

**Dome** See Page  
DF8 Series Fixed Mount Dome 211

## Cameras

Color	CB = CC3701H-2	95
	CD = CC3701H-2X	95
	CE = CC3610H-6X	101
	CF = CC3610H-6	101
	CG = CC3710S-6	109
	CH = CC3710H-6	99
	CJ = CC3710S-6X	109
	CK = CC3710H-6X	99
	CL = CC3751H-2	97
	CM = CC3651H-2X	97
	DA = CC3770H-6	103
	DB = CC3770H-6X	103
Monochrome	ME = MC3610H-6X	117
	MF = MC3710H-6	115
	MG = MC3710S-6	121
	MH = MC3610H-6	117
	MJ = MC3710S-6X	121
	MK = MC3710H-6X	115
	ML = MC3651H-2	113
	MM = MC3651H-2X	113

## Lenses

Manual Iris	2.3 = 13FA2.3	125
	2.8 = 13FA2.8	125
	4 = 13FA4	125
	8 = 13FA8	125
	V2 = 13VA2.5-6	131
	V21 = 13VA2.8-12	131
	V3 = 13VA3-8	131
	V5 = 13VA5-40	131
	V50 = 13VA5-50	131
Auto Iris	2.3 = 13FD2.3	129
	2.8 = 13FD2.8	129
	4 = 13FD4	129
	8 = 13FD8	129
	V2 = 13VD2.5-6	133
	V21 = 13VD2.8-12	133
	V3 = 13VD3-8	133
	V5 = 13VD5-40	133
	V50 = 13VD5-50	133

## DF8 Series dome

<b>CG</b>	= CC3710S-6	Color, standard resolution (NTSC)
<b>CJ</b>	= CC3710S-6X	Color, standard resolution (PAL)
<b>CH</b>	= CC3710H-6	Color, high resolution (NTSC)
<b>CK</b>	= CC3710H-6X	Color, high resolution (PAL)
<b>CF</b>	= CC3610H-6	Color, high resolution, EXview HAD™ (NTSC)
<b>CE</b>	= CC3610H-6X	Color, high resolution, EXview HAD™ (PAL)
<b>DA</b>	= CC3770H-6	Color/B-W, high resolution (NTSC)
<b>DB</b>	= CC3700H-6X	Color/B-W, high resolution (PAL)
<b>CL</b>	= CC3751H-2	Color, high resolution, LowLight™ DSS (NTSC)
<b>CM</b>	= CC3651H-2X	Color, high resolution, LowLight™ DSS (PAL)
<b>CB</b>	= CC3701H-2	Color, high resolution, EDR (NTSC)
<b>CD</b>	= CC3701H-2X	Color, high resolution, EDR (PAL)
<b>MG</b>	= MC3710S-6	Monochrome, standard resolution (EIA)
<b>MJ</b>	= MC3710S-6X	Monochrome, standard resolution (CCIR)
<b>MF</b>	= MC3710H-6	Monochrome, high resolution (EIA)
<b>MK</b>	= MC3710H-6X	Monochrome, high resolution (CCIR)
<b>MH</b>	= MC3610H-6	Monochrome, high resolution (EIA)
<b>ME</b>	= MC3610H-6X	Monochrome, high resolution (CCIR)
<b>ML</b>	= MC3651H-2	Monochrome, high resolution, LowLight™ DSS (EIA)
<b>MM</b>	= MC3651H-2X	Monochrome, high resolution, LowLight™ DSS (CCIR)

**PB** = Pendant, black (indoor)

**PG** = Pendant, light gray (indoor/outdoor)

**Blank** = In-ceiling back box

**Blank** = Bronze dome, in-ceiling only (1 f-stop light loss)

**0** = Black opaque dome with Smoked window (1/2 f-stop light loss)

**1** = Black opaque dome with Clear window

**2** = Chrome dome (2 f-stops light loss)

**3** = Gold dome (2 f-stops light loss)

**E0** = Outdoor pendant (includes heater and sun shield), light gray, opaque black dome with smoked window (1/2 f-stop of light loss)

**E1** = Outdoor pendant (includes heater and sun shield), light gray, opaque black dome with clear window

**2.3** = 2.3 mm lens

**2.8** = 2.8 mm lens

**4** = 4 mm lens

**8** = 8 mm lens

**V2** = 2.5-6 mm varifocal lens

**V21** = 2.8-12 mm varifocal lens

**V3** = 3-8 mm varifocal lens

**V50** = 5-50 mm varifocal lens

**Blank** = No lens

**A** = Auto iris

**Blank** = Manual iris

DF8CG-PB-0V3A



## NOTES



## ICS090 Series Camclosure® Camera System

INDOOR, MINI DOME, SURFACE MOUNT/IN-CEILING

### Product Features

- Fully-Integrated Indoor Enclosure with Camera and Lens
- Single Model for Surface Mount and Recessed Ceiling Applications
- Video Service Connector for On-Site Setup
- Shipped Completely Assembled, Easy to Install
- 12 VDC or 24 VAC Operation, Auto Sensing
- Manual, 3-Axis (Pan/Tilt/Rotation) Positioning Allows Adjustment for Optimum Camera Rotation and Placement
- Housing Available in White or Black
- Available with Smoked or Clear Dome
- Clear Dome Includes a Discreet Liner
- NTSC/PAL or EIA/CCIR Camera Formats
- All Color Cameras Feature Digital Signal Processing
- UTP Output (Twisted Pair) Models Available
- Includes 4S Adapter Plate
- 3-Year Warranty

The **ICS090 Series Camclosure® Integrated Camera System** integrates a camera and lens package into a small, versatile indoor enclosure that can be mounted directly to a ceiling/wall or recessed in a ceiling/wall.

The **ICS090 Series** is shipped completely assembled making installation fast and easy. To surface-mount the unit, remove it from the box, attach it to the mounting surface, and connect video and power. For recessed installations simply remove the surface mount ring (no tools required) and then install the unit inside a ceiling/wall. A 4S adapter plate is supplied with the unit for electrical box installations.

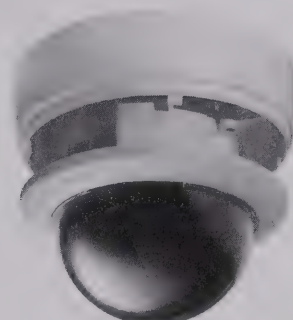
The **ICS090 Series** features a 3-axis camera and lens positioning system that is capable of 360 degrees of pan, 140 degrees of tilt and 360 degrees of rotation. The system also has an internal sensing system for input voltage (12 VDC or 24 VAC), easy access to V-phase adjustment (color only), and a built-in service connector for on-site camera setup.

An optional 4-foot service/monitor cable (**ICS090-SC**) is available for on-site setup and adjustments. To use the cable simply plug one



SHOWN IN BLACK

**NOTE: THE SURFACE MOUNT RING IS REMOVED FOR RECESSED INSTALLATIONS.**



SHOWN IN WHITE

end of the cable directly into the service connector of the **ICS090** and connect the other end to any standard BNC (VIDEO IN) connector on a monitor.

The **ICS090 Series** has a large selection of camera and lens options, including the following:

- High-resolution color camera with auto iris, varifocal lens (3-6 mm or 4-9 mm)
- High and standard resolution color cameras with fixed focal length lenses
- Standard resolution monochrome cameras with fixed focal length lenses

All cameras with fixed focal lenses are available in 2.9 mm, 3.6 mm, 6 mm, 8 mm, or 12 mm lengths.

The **ICS090 Series** is designed for continuous operation and is supported by a three-year warranty.



DataFAX  
SPEC: 22462  
MANUAL: 224626

C2462 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## ELECTRICAL

Input Voltage	12 VDC or 24 VAC (±10%), auto-sensing
Power Consumption	3 watts or less
Video Connector	BNC

## GENERAL

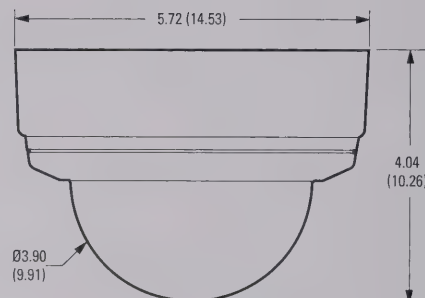
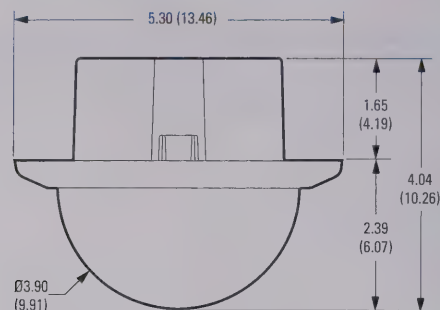
Pan/Tilt Adjustment	
Pan	360°
Tilt	140° (20° to 160° range)
Rotation	360°
Construction	
Back Box and	ABS plastic
Surface Mount Ring	Polycarbonate
Bubble	White or black
Finish	Refer to dimension drawings
Dimensions	Indoor
Environment	32°F to 120°F (0° to 49°C)
Operating Temperature	
Weight	
Unit	0.52 lb (0.24 kg)
Shipping	2 lb (0.91 kg)

## OPTIONAL ACCESSORIES

ICS090-SC	4-foot service/monitor cable. Compatible with any standard monitor BNC connector.
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## CERTIFICATIONS

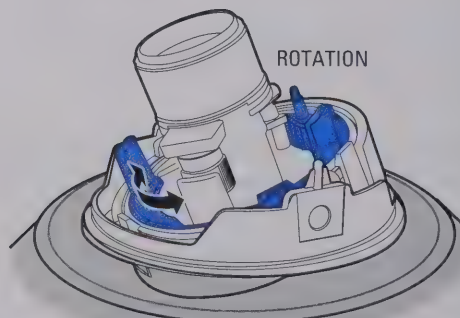
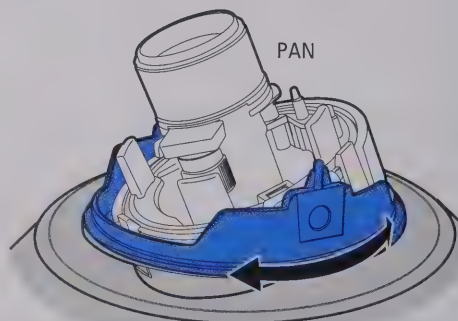
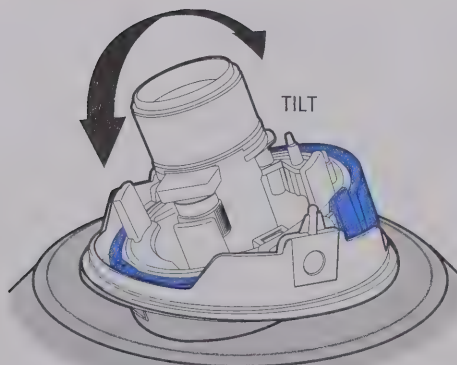
- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

## 3-AXIS POSITIONING SYSTEM

The ICS090 Series features a 3-axis camera and lens configuration for optimal camera rotation and placement. The camera and lens positioning system is capable of 360° of pan, 140° of tilt, and 360° of rotation.



## CAMERA SPECIFICATIONS

	<b>Black-White Standard Resolution Fixed, Without Iris</b> (Models ICS090- <b>MA</b> x/ ICS090- <b>MC</b> x)	<b>Color Standard Resolution Fixed, Without Iris</b> (Models ICS090- <b>CA</b> x/ ICS090- <b>CC</b> x)	<b>Color High Resolution Fixed, Without Iris</b> (Models ICS090- <b>CR</b> x/ ICS090- <b>CS</b> x)	<b>Color High Resolution Varifocal, Auto Iris</b> (Models ICS090- <b>CRV</b> xA/ ICS090- <b>CSV</b> xA)
Signal System	EIA or CCIR	NTSC or PAL	NTSC or PAL	NTSC or PAL
Imaging Device	1/3-inch CCD	1/3-inch Interline Color CCD	1/3-inch Interline Color CCD (Hyper HAD™)	1/4-inch Interline Color CCD
Scanning System	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace
Sync System	Internal	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)
Horizontal Resolution	EIA: 420 TV lines CCIR: 420 TV lines	NTSC: 350 TV lines PAL: 350 TV lines	NTSC: 470 TV lines PAL: 460 TV lines	NTSC: 480 TV lines PAL: 480 TV lines
Signal-to-Noise Ratio	50 dB	48 dB	48 dB	48 dB (AGC Off)
Min. Illumination	0.1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	Less than 1.2 lux (f1.2)
Video Out	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)
Gain Control	Auto	Auto	NTSC: Auto PAL: Manual	On/Off by DIP switch (0-20 dB)
Exposure	Electronic Shutter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)
White Balance	Not applicable	Auto	Auto	Auto or manual (switch selectable)
Backlight Compensation	Auto	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto; adjusts AGC and AES
Power Source*	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC

\*24 VAC power is recommended when installing any Camclosure® Integrated Camera System under fluorescent lighting conditions.

## LENS SPECIFICATIONS

Camera	<b>Fixed Focal Length Without Iris</b>										<b>Varifocal With Auto Iris</b>
	Color	B/W	Color	B/W	Color	B/W	Color	B/W	Color	B/W	Color, High Resolution only
Focal Length	2.9 mm	3.0 mm	3.6 mm		6.0 mm		8.0 mm		12.0 mm		3-6 mm      4-9 mm
Format Size	1/3-inch		1/3-inch		1/3-inch		1/3-inch		1/3-inch		1/4-inch      —
Relative Aperture (F)	2.0		2.0		1.8	2.5	1.8	2.5	2.0		1.2 to 1.5      1.6 to 2.4
Operation											
Iris	N/A		N/A		N/A		N/A		N/A		Auto      Auto
Focus	Manual		Manual		Manual		Manual		Manual		Manual      Manual
Zoom	N/A		N/A		N/A		N/A		N/A		Manual      Manual
Angle of View**											
Horizontal	90°	87°	74°		42°	38°	32°	29°	21°		72° to 36°      51.8° to 23.8°
Diagonal	—	—	—	—	—	—	—	—	—	—	96° to 46°      66.1° to 29.7°
Vertical	69°	67°	55°		33°	30°	25°	23°	17°		52° to 26°      38.3° to 17.8°

\*\*Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.



## SYSTEM MODELS

**ICS090 SERIES HOUSING MODELS (No Camera/Lens)**

The following models are not compatible with camera and lens packages and are not upgradable.

ICS-090NHU White housing with smoked dome

ICS-090BHNU Black housing with smoked dome

**ICS090 SERIES SYSTEM MODELS (White Finish)**

Camera Type	Lower Dome	Lens/Iris	BNC Connector (NTSC)	UTP-Unshielded Twisted Pair* (NTSC)	BNC Connector (PAL)	UTP-Unshielded Twisted Pair* (PAL)
Color, High Resolution	Smoked	2.9 mm	ICS090-CR3	ICS090-CR3T	ICS090-CS3	ICS090-CS3T
		3.6 mm	ICS090-CR3.6	ICS090-CR3.6T	ICS090-CS3.6	ICS090-CS3.6T
		6 mm	ICS090-CR6	ICS090-CR6T	ICS090-CS6	ICS090-CS6T
		8 mm	ICS090-CR8	ICS090-CR8T	ICS090-CS8	ICS090-CS8T
		12 mm	ICS090-CR12	ICS090-CR12T	ICS090-CS12	ICS090-CS12T
		3-6 mm with Auto Iris	ICS090-CRV3A	ICS090-CRV3AT	ICS090-CSV3A	ICS090-CSV3AT
		4-9 mm with Auto Iris	ICS090-CRV4A	ICS090-CRV4AT	ICS090-CSV4A	ICS090-CSV4AT
	Clear	2.9 mm	ICS091-CR3	ICS091-CR3T	ICS091-CS3	ICS091-CS3T
		3.6 mm	ICS091-CR3.6	ICS091-CR3.6T	ICS091-CS3.6	ICS091-CS3.6T
		6 mm	ICS091-CR6	ICS091-CR6T	ICS091-CS6	ICS091-CS6T
		8 mm	ICS091-CR8	ICS091-CR8T	ICS091-CS8	ICS091-CS8T
		12 mm	ICS091-CR12	ICS091-CR12T	ICS091-CS12	ICS091-CS12T
		3-6 mm with Auto Iris	ICS091-CRV3A	ICS091-CRV3AT	ICS091-CSV3A	ICS091-CSV3AT
		4-9 mm with Auto Iris	ICS091-CRV4A	ICS091-CRV4AT	ICS091-CSV4A	ICS091-CSV4AT
Color, Standard Resolution	Smoked	2.9 mm	ICS090-CA3	ICS090-CA3T	ICS090-CC3	ICS090-CC3T
		3.6 mm	ICS090-CA3.6	ICS090-CA3.6T	ICS090-CC3.6	ICS090-CC3.6T
		6 mm	ICS090-CA6	ICS090-CA6T	ICS090-CC6	ICS090-CC6T
		8 mm	ICS090-CA8	ICS090-CA8T	ICS090-CC8	ICS090-CC8T
		12 mm	ICS090-CA12	ICS090-CA12T	ICS090-CC12	ICS090-CC12T
	Clear	2.9 mm	ICS091-CA3	ICS091-CA3T	ICS091-CC3	ICS091-CC3T
		3.6 mm	ICS091-CA3.6	ICS091-CA3.6T	ICS091-CC3.6	ICS091-CC3.6T
		6 mm	ICS091-CA6	ICS091-CA6T	ICS091-CC6	ICS091-CC6T
		8 mm	ICS091-CA8	ICS091-CA8T	ICS091-CC8	ICS091-CC8T
		12 mm	ICS091-CA12	ICS091-CA12T	ICS091-CC12	ICS091-CC12T
B-W Standard Resolution	Smoked	2.9 mm	ICS090-MA3	ICS090-MA3T	ICS090-MC3	ICS090-MC3T
		3.6 mm	ICS090-MA3.6	ICS090-MA3.6T	ICS090-MC3.6	ICS090-MC3.6T
		6 mm	ICS090-MA6	ICS090-MA6T	ICS090-MC6	ICS090-MC6T
		8 mm	ICS090-MA8	ICS090-MA8T	ICS090-MC8	ICS090-MC8T
		12 mm	ICS090-MA12	ICS090-MA12T	ICS090-MC12	ICS090-MC12T
	Clear	2.9 mm	ICS091-MA3	ICS091-MA3T	ICS091-MC3	ICS091-MC3T
		3.6 mm	ICS091-MA3.6	ICS091-MA3.6T	ICS091-MC3.6	ICS091-MC3.6T
		6 mm	ICS091-MA6	ICS091-MA6T	ICS091-MC6	ICS091-MC6T
		8 mm	ICS091-MA8	ICS091-MA8T	ICS091-MC8	ICS091-MC8T
		12 mm	ICS091-MA12	ICS091-MA12T	ICS091-MC12	ICS091-MC12T

\*Compatible with NVT and NITEK. Call your customer service representative for part numbers. A separate receiver is needed.

## ICS090 SERIES SYSTEM MODELS (Black Finish)

Camera Type	Lower Dome	Lens/Iris	BNC Connector (NTSC)	UTP-Unshielded Twisted Pair* (NTSC)	BNC Connector (PAL)	UTP-Unshielded Twisted Pair* (PAL)
Color, High Resolution	Smoked	2.9 mm	ICS090B-CR3	ICS090B-CR3T	ICS090B-CS3	ICS090B-CS3T
		3.6 mm	ICS090B-CR3.6	ICS090B-CR3.6T	ICS090B-CS3.6	ICS090B-CS3.6T
		6 mm	ICS090B-CR6	ICS090B-CR6T	ICS090B-CS6	ICS090B-CS6T
		8 mm	ICS090B-CR8	ICS090B-CR8T	ICS090B-CS8	ICS090B-CS8T
		12 mm	ICS090B-CR12	ICS090B-CR12T	ICS090B-CS12	ICS090B-CS12T
		3-6 mm with Auto Iris	ICS090B-CRV3A	ICS090B-CRV3AT	ICS090B-CSV3A	ICS090B-CSV3AT
		4-9 mm with Auto Iris	ICS090B-CRV4A	ICS090B-CRV4AT	ICS090B-CSV4A	ICS090B-CSV4AT
	Clear	2.9 mm	ICS091B-CR3	ICS091B-CR3T	ICS091B-CS3	ICS091B-CS3T
		3.6 mm	ICS091B-CR3.6	ICS091B-CR3.6T	ICS091B-CS3.6	ICS091B-CS3.6T
		6 mm	ICS091B-CR6	ICS091B-CR6T	ICS091B-CS6	ICS091B-CS6T
		8 mm	ICS091B-CR8	ICS091B-CR8T	ICS091B-CS8	ICS091B-CS8T
		12 mm	ICS091B-CR12	ICS091B-CR12T	ICS091B-CS12	ICS091B-CS12T
		3-6 mm with Auto Iris	ICS091B-CRV3A	ICS091B-CRV3AT	ICS091B-CSV3A	ICS091B-CSV3AT
		4-9 mm with Auto Iris	ICS091B-CRV4A	ICS091B-CRV4AT	ICS091B-CSV4A	ICS091B-CSV4AT
Color, Standard Resolution	Smoked	2.9 mm	ICS090B-CA3	ICS090B-CA3T	ICS090B-CC3	ICS090B-CC3T
		3.6 mm	ICS090B-CA3.6	ICS090B-CA3.6T	ICS090B-CC3.6	ICS090B-CC3.6T
		6 mm	ICS090B-CA6	ICS090B-CA6T	ICS090B-CC6	ICS090B-CC6T
		8 mm	ICS090B-CA8	ICS090B-CA8T	ICS090B-CC8	ICS090B-CC8T
		12 mm	ICS090B-CA12	ICS090B-CA12T	ICS090B-CC12	ICS090B-CC12T
	Clear	2.9 mm	ICS091B-CA3	ICS091B-CA3T	ICS091B-CC3	ICS091B-CC3T
		3.6 mm	ICS091B-CA3.6	ICS091B-CA3.6T	ICS091B-CC3.6	ICS091B-CC3.6T
		6 mm	ICS091B-CA6	ICS091B-CA6T	ICS091B-CC6	ICS091B-CC6T
		8 mm	ICS091B-CA8	ICS091B-CA8T	ICS091B-CC8	ICS091B-CC8T
		12 mm	ICS091B-CA12	ICS091B-CA12T	ICS091B-CC12	ICS091B-CC12T
B-W Standard Resolution	Smoked	2.9 mm	ICS090B-MA3	ICS090B-MA3T	ICS090B-MC3	ICS090B-MC3T
		3.6 mm	ICS090B-MA3.6	ICS090B-MA3.6T	ICS090B-MC3.6	ICS090B-MC3.6T
		6 mm	ICS090B-MA6	ICS090B-MA6T	ICS090B-MC6	ICS090B-MC6T
		8 mm	ICS090B-MA8	ICS090B-MA8T	ICS090B-MC8	ICS090B-MC8T
		12 mm	ICS090B-MA12	ICS090B-MA12T	ICS090B-MC12	ICS090B-MC12T
	Clear	2.9 mm	ICS091B-MA3	ICS091B-MA3T	ICS091B-MC3	ICS091B-MC3T
		3.6 mm	ICS091B-MA3.6	ICS091B-MA3.6T	ICS091B-MC3.6	ICS091B-MC3.6T
		6 mm	ICS091B-MA6	ICS091B-MA6T	ICS091B-MC6	ICS091B-MC6T
		8 mm	ICS091B-MA8	ICS091B-MA8T	ICS091B-MC8	ICS091B-MC8T
		12 mm	ICS091B-MA12	ICS091B-MA12T	ICS091B-MC12	ICS091B-MC12T

\*Compatible with NVT and NITEK. Call your customer service representative for part numbers. A separate receiver is needed.



## OPTIONAL ACCESSORIES

## RECOMMENDED POWER SUPPLIES

TF2000

Power supply for one 24 VAC camera, 20 VA

MCS Series

Multiple 24 VAC camera power supply, indoor

MCS\*E Series

Multiple 24 VAC camera power supply, indoor

## OPTIONAL ACCESSORIES

ICS090-SC

4-foot service/monitor cable; compatible with any standard monitor BNC connector

## LENS PACK OPTIONS

Lens packs offer the added convenience of easily changing a camera's field of view by simply changing the lens.

The following lens packs are available for all Camclosures. All fixed focal length lenses ranging from 2.9 mm to 12 mm are interchangeable with any camera module. Varifocal lenses are not interchangeable.

## Variety Pack

13FFD-V5PAK

Variety package of five lenses, one each  
2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm

## Single Lens Pack

13FF3D

2.9 mm lens and mount

13FF3.6D

3.6 mm lens and mount

13FF6D

6 mm lens and mount

13FF8D

8 mm lens and mount

13FF12D

12 mm lens and mount

## Four Lens Pack

13FF3D-4PAK

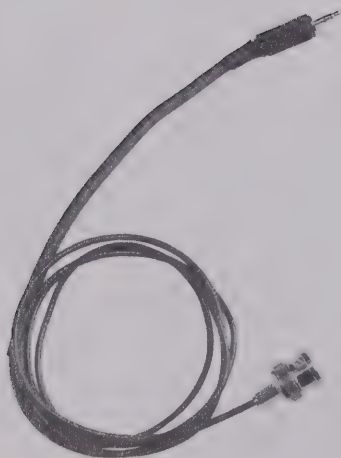
Package of four 2.9 mm lenses and mounts

13FF3.6D-4PAK

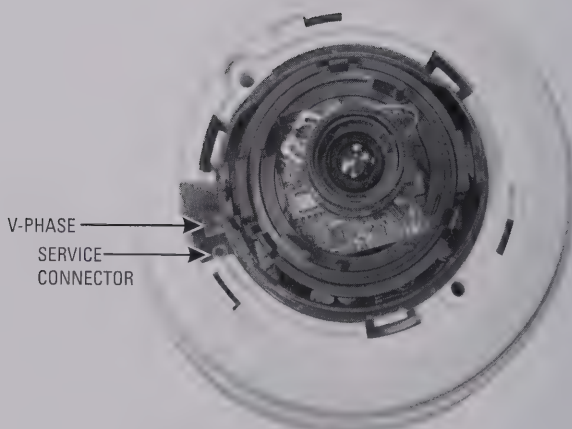
Package of four 3.6 mm lenses and mounts

13FF6D-4PAK

Package of four 6 mm lenses and mounts



ICS090-SC 4-FOOT SERVICE/MONITOR CABLE



ICS090 SERIES CAMCLOSURE FEATURES EASY ACCESS  
TO V-PHASE ADJUSTMENT (COLOR ONLY) AND BUILT-IN  
SERVICE CONNECTOR FOR ON-SITE CAMERA SET-UP



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Indicates change or addition.

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## ICS100/150 Series Camclosure® Camera System

### MINI DOME, SURFACE AND IN-CEILING

#### Product Features

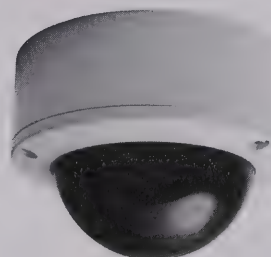
- Fully-Integrated Enclosure with Camera and Lens
- Rugged, High-Impact, Vandal-Resistant, Puncture-Proof Domes; Tamper-Resistant Hardware
- Available with DSS LowLight™ Technology
- Easy to Install; Camera Module Easy to Remove
- Versatile Models for Surface or In-Ceiling Mounting
- 12 VDC or 24 VAC Operation
- Low-Temperature Operation to -50°F (-46°C); De-ices to 25°F (-4°C)
- Available with Smoked or Clear Dome
- NTSC/PAL or EIA/CCIR Camera Formats
- All Color Cameras Feature Digital Signal Processing
- ICS150 Series Suitable for Use in Environmental Air Handling Spaces

The **ICS100/150 Series Camclosure® Integrated Camera System** integrates a camera and lens package into a small, high-security enclosure. All models are quick and easy to install and are perfect for a variety of indoor and outdoor applications. It is ideal for residential, office, mall, hospital, school, parking garage, correction and detention, and other medium-security installations subject to vandalism.

The **ICS100 Series System** surface-mount dome is designed to mount directly to a ceiling, wall, or 4S electrical box using an optional adapter plate or standard mud ring. The dome's back box features two conduit openings, one in the back, and a threaded 3/4-inch opening in the side.

The **ICS150 Series System** is an in-ceiling dome designed for suspended ceiling or recessed ceiling/wall installations. An adapter plate is supplied with the dome to mount the unit to a 4S electrical box or to provide additional support for suspended ceiling installations.

The lower dome of the **ICS100/150 Series System** is available with clear or smoked bubble. Models with a clear lower dome include a black dome liner for discreet viewing. Domes with a smoked bubble may be purchased without the camera module for pre-installation or for camera bicycling.



ICS100 SERIES DOME



ICS150 SERIES DOME

The **ICS100/150 Series Camclosure System** offers a large selection of camera and lens options. Available camera modules include the following:

- LowLight DSS, high-resolution color camera with auto iris, varifocal lens (2.6-6 mm or 4-9 mm)
- High-resolution color camera with auto iris, varifocal lens (3-6 mm or 4-9 mm)
- High and standard resolution color cameras with fixed focal length lenses (without or with iris)
- Standard resolution monochrome cameras with fixed focal length lenses

The LowLight color camera has extended Digital Slow Shutter (DSS) settings to enhance the low light performance of the camera by automatically adjusting the number of fields of integration. This slows the picture frame rate and increases the camera's sensitivity in low light conditions.

All color cameras with fixed focal length lenses are available with or without auto iris, and the monochrome camera is available with a fixed focal lens without auto iris. Available fixed auto iris lenses include 6 mm, 8 mm, or 12 mm.



DataFAX

SPEC: 22407

MANUAL: 224076 (ICS100), 224106 (ICS150)

C2407 / REVISED 10-03



U.S. Patent D-476,025

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## GENERAL

Construction	Aluminum with steel camera mounting bracket and polycarbonate dome
Finish	
ICS100 Series	Light gray polyester powder coat
ICS150 Series	White polyester powder coat trim ring with charcoal gray back box
Light Attenuation	
Smoked	1.5 f-stops light loss
Clear	Zero light loss
Dimensions	
ICS100 Series	
Base	3.70 (H) x 5.30 (W) inches (9.40 x 13.46 cm)
Bubble	3.75 in. Diameter
ICS150 Series	
Above Ceiling	1.75 (H) x 3.50 (W) inches (4.45 x 8.89 cm)
Below Ceiling	2.42 (H) x 5.48 (W) inches (6.15 x 13.90 cm)
Bubble	3.75 inch Diameter
Unit Weight	
ICS100 Series	2.20 lb (1.00 kg)
ICS150 Series	1.70 lb (0.77 kg)
Shipping Weight	
ICS100 Series	4.0 lb (1.81 kg)
ICS150 Series	3.0 lb (1.36 kg)

## ELECTRICAL

Input Voltage*	12 VDC or 24 VAC ( $\pm 10\%$ )
Power Consumption	
Camera	Less than 3 watts
Heaters	10 watts when active; thermostatically controlled

## MECHANICAL

Cable Entry	
ICS100 Series	One 3/4-inch (1.91 cm) NPT threaded opening on side; one 3/4-inch (1.91 cm) opening on base
Pan/Tilt Adjustment	Manual 360° pan; 180° tilt

## VIDEO

Signal System	
Monochrome	EIA or CCIR
Color	NTSC or PAL
Video Connector	BNC
Scanning System	2:1 interlace
Video Out	1 Vp-p Composite (75 ohm)

## ENVIRONMENTAL

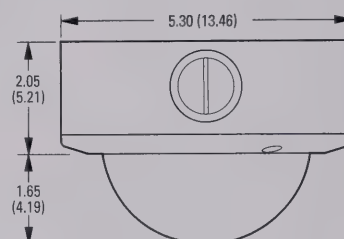
Environment	Low temperature, indoor/outdoor
Operating Temperature	-50°F to 122°F (-46°C to 50°C); de-ices to 25°F (-4°C)
Thermostat Operation	Heater is thermostatically controlled to activate ON at 50°F (10°C) and OFF at 80°F (27°C)

## CERTIFICATIONS/RATINGS/PATENTS

- CE and FCC, Class A (models with monochrome cameras)
- CE and FCC, Class B (models with color cameras only)
- UL Listed
- UL Listed to Canadian safety standards
- Meets NEC requirements for use in environmental air handling spaces
- Tested in accordance with MIL-STD 810E as follows:
  - Shock test; Section 516.4 (exceeds IEC 68-2-27)
  - Humidity test; Sections 520.1 and 507.3 (exceeds IEC 68-2-30)
  - Vibration test; Section 514.4 (exceeds IEC 68-2-6)
- ASTM Shipping Standard
- ISTA Shipping Standard

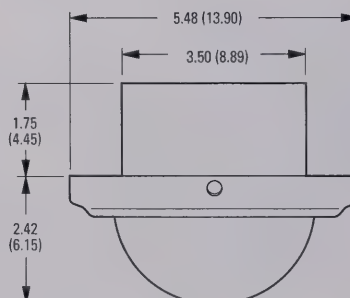
All tests are performed in accordance with ISO Guide 25 and ANSI/NCSL Z540-1.

- U.S. Patent D-476,025



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ICS100 SERIES DOME



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ICS150 SERIES DOME

\*24 VAC power is recommended when installing any Camclosure® Integrated Camera System under fluorescent lighting conditions.

## CAMERA SPECIFICATIONS

### Color, High Resolution

	<b>Color High Resolution Fixed, Without Iris</b> (Models ICSxxx- <b>CR</b> x/ ICSxxx- <b>CS</b> x)	<b>Color High Resolution Fixed, Auto Iris</b> (Models ICSxxx- <b>CR</b> xA/ ICSxxx- <b>CS</b> xA)	<b>Color High Resolution Varifocal, Auto Iris</b> (Models ICSxxx- <b>CRV</b> xA/ ICSxxx- <b>CSV</b> xA)	<b>LowLight DSS Color Varifocal, Auto Iris</b> (Models ICSxxx- <b>CDV</b> xA/ ICSxxx- <b>CEV</b> xA)
Imaging Device	1/3-inch Interline Color CCD (Hyper HAD™)	1/3-inch Interline Color CCD (Hyper HAD™)	1/4-inch Interline Color CCD (Hyper HAD™)	1/3-inch Interline Color CCD
Sync System	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	Adjustable AC line lock/internal, auto select
Horizontal Resolution	NTSC: 470 TV lines PAL: 460 TV lines	NTSC: 450 TV lines PAL: 440 TV lines	NTSC: 480 TV lines PAL: 480 TV lines	NTSC: 480 TV lines PAL: 480 TV lines
Signal-to-Noise Ratio	48 dB	48 dB	48 dB (AGC Off)	50 dB
Min. Illumination	0.1 lux (f2.0)	1 lux (f2.0)	Less than 1.2 lux (f1.2)	.075 lux @ 40 IRE DSS Off, F1.6 @ wide angle 1.20 lux @ 50 IRE DSS Off, F1.6 @ wide angle 0.025 lux @ 40 IRE, 30 fields of DSS, F1.6 @ wide angle 0.040 lux @ 50 IRE, 30 fields of DSS, F1.6 @ wide angle
Gain Control	NTSC: Auto PAL: Manual	Auto	On/Off by DIP switch (0-20 dB)	Auto/Manual by DIP switch
Exposure	Electronic Shutter (1/60 - 1/100,000)	Automatic Control w/DC Iris Meter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Automatic Control w/DC Iris Meter (1/60 - 1/100,000)
White Balance	Auto	Auto	Auto or manual (switch selectable)	Auto
Backlight Compensation	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto; adjusts AGC and AES	ON/OFF (switch selectable)

### B-W and Color, Standard Resolution

	<b>Black-White Standard Resolution Fixed, Without Iris</b> (Models ICSxxx- <b>MA</b> x/ ICSxxx- <b>MC</b> x)	<b>Color Standard Resolution Fixed, Without Iris</b> (Models ICSxxx- <b>CA</b> x/ ICSxxx- <b>CC</b> x)	<b>Color Standard Resolution Fixed, Auto Iris</b> (Models ICSxxx- <b>CA</b> xA/ ICSxxx- <b>CC</b> xA)
Imaging Device	1/3-inch CCD	1/3-inch Interline Color CCD	1/3-inch Interline Color CCD (Hyper HAD™)
Sync System	Internal	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)
Horizontal Resolution	EIA: 420 TV lines CCIR: 420 TV lines	NTSC: 350 TV lines PAL: 350 TV lines	NTSC: 330 TV lines PAL: 320 TV lines
Signal-to-Noise Ratio	50 dB	48 dB	48 dB
Min. Illumination	0.1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)
Gain Control	Auto	Auto	Auto
Exposure	Electronic Shutter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Automatic Control w/DC Iris Meter (1/60 - 1/100,000)
White Balance	Not applicable	Auto	Auto
Backlight Compensation	Auto	Auto or manual (switch selectable)	Auto or manual (switch selectable)



## LENS SPECIFICATIONS

Camera	Fixed Focal Without Iris									
	Color	B-W	Color	B-W	Color	B-W	Color	B-W	Color	B-W
Focal Length	2.9 mm	3.0 mm	3.6 mm		6.0 mm		8.0 mm		12.0 mm	
Format Size	1/3-inch		1/3-inch		1/3-inch		1/3-inch		1/3-inch	
Relative Aperture (F)	2.0		2.0		1.8	2.5	1.8	2.5	2.0	
Operation Iris Focus Zoom	N/A Manual N/A		N/A Manual N/A		N/A Manual N/A		N/A Manual N/A		N/A Manual N/A	
Angle of View**										
Horizontal	90°	87°	74°		42°	38°	32°	29°	21°	
Diagonal	—	—	—	—	—	—	—	—	—	—
Vertical	69°	67°	55°		33°	30°	25°	23°	17°	

Camera	Fixed Focal With Auto Iris		
	Color	Color	Color
Focal Length	6.0 mm	8.0 mm	12.0 mm
Format Size	1/3-inch	1/3-inch	1/3-inch
Relative Aperture (F)	1.8	1.8	1.8
Operation Iris Focus Zoom	Auto Manual N/A	Auto Manual N/A	Auto Manual N/A
Angle of View**			
Horizontal	42°	32°	21°
Diagonal	—	—	—
Vertical	33°	25°	17°

Camera	Varifocal With Auto Iris			
	LowLight DSS Color High Resolution		Color High Resolution	
Focal Length	2.6 mm ~ 6.0 mm		3.0 mm ~ 6.0 mm	4.0 mm ~ 9.0 mm
Format Size	1/3-inch		1/4-inch	1/4-inch
Relative Aperture (F)	1.6		1.2 to 1.5	1.6 to 2.4
Operation Iris Focus Zoom	Auto Manual Manual		Auto Manual Manual	Auto Manual Manual
Angle of View**				
Horizontal	106.0° to 47.6°		72° to 36°	51.8° to 23.8°
Diagonal	134.8° to 59.4°		96° to 46°	66.1° to 29.7°
Vertical	78.2° to 35.8°		52° to 26°	38.3° to 17.8°

\*\*Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.

## MODELS

### Dome Only

The following models allow pre-installation of domes or can be used in a camera bicycling installation:

ICS-DO100A ICS100 Series surface mount dome (no camera/lens) with smoked bubble.

ICS-DO150A ICS150 Series in-ceiling dome (no camera/lens) with smoked bubble.

### SYSTEM MODELS, B-W Camera

Camera Type	Lower Dome	Lens	Lens Type	Surface Mount (ICS100 Series)		In-Ceiling (ICS150 Series)	
				EIA	CCIR	EIA	CCIR
B-W, Standard Resolution	Smoked	3.0 mm	Fixed, without iris	ICS100-MA3	ICS100-MC3	ICS150-MA3	ICS150-MC3
		3.6 mm	Fixed, without iris	ICS100-MA3.6	ICS100-MC3.6	ICS150-MA3.6	ICS150-MC3.6
		6 mm	Fixed, without iris	ICS100-MA6	ICS100-MC6	ICS150-MA6	ICS150-MC6
		8 mm	Fixed, without iris	ICS100-MA8	ICS100-MC8	ICS150-MA8	ICS150-MC8
		12 mm	Fixed, without iris	ICS100-MA12	ICS100-MC12	ICS150-MA12	ICS150-MC12
	Clear	3.0 mm	Fixed, without iris	ICS101-MA3	ICS101-MC3	ICS151-MA3	ICS151-MC3
		3.6 mm	Fixed, without iris	ICS101-MA3.6	ICS101-MC3.6	ICS151-MA3.6	ICS151-MC3.6
		6 mm	Fixed, without iris	ICS101-MA6	ICS101-MC6	ICS151-MA6	ICS151-MC6
		8 mm	Fixed, without iris	ICS101-MA8	ICS101-MC8	ICS151-MA8	ICS151-MC8
		12 mm	Fixed, without iris	ICS101-MA12	ICS101-MC12	ICS151-MA12	ICS151-MC12

### SYSTEM MODELS, Color Camera

Camera Type	Lower Dome	Lens	Lens Type	Surface Mount (ICS100 Series)		In-Ceiling (ICS150 Series)	
				NTSC	PAL	NTSC	PAL
DSS Color, High Resolution	Smoked	2.6 ~ 6 mm	Varifocal, auto iris	ICS100-CDV3A	ICS100-CEV3A	ICS150-CDV3A	ICS150-CEV3A
		4 ~ 9 mm	Varifocal, auto iris	ICS100-CDV4A	ICS100-CEV4A	ICS150-CDV4A	ICS150-CEV4A
	Clear	2.6 ~ 6 mm	Varifocal, auto iris	ICS101-CDV3A	ICS101-CEV3A	ICS151-CDV3A	ICS151-CEV3A
		4 ~ 9 mm	Varifocal, auto iris	ICS101-CDV4A	ICS101-CEV4A	ICS151-CDV4A	ICS151-CEV4A
Color, High Resolution	Smoked	2.9 mm	Fixed, without iris	ICS100-CR3	ICS100-CS3	ICS150-CR3	ICS150-CS3
		3.6 mm	Fixed, without iris	ICS100-CR3.6	ICS100-CS3.6	ICS150-CR3.6	ICS150-CS3.6
		6 mm	Fixed, without iris	ICS100-CR6	ICS100-CS6	ICS150-CR6	ICS150-CS6
			Fixed, auto iris	ICS100-CR6A	ICS100-CS6A	ICS150-CR6A	ICS150-CS6A
		8 mm	Fixed, without iris	ICS100-CR8	ICS100-CS8	ICS150-CR8	ICS150-CS8
			Fixed, auto iris	ICS100-CR8A	ICS100-CS8A	ICS150-CR8A	ICS150-CS8A
		12 mm	Fixed, without iris	ICS100-CR12	ICS100-CS12	ICS150-CR12	ICS150-CS12
			Fixed, auto iris	ICS100-CR12A	ICS100-CS12A	ICS150-CR12A	ICS150-CS12A
		3 ~ 6 mm	Varifocal, auto iris	ICS100-CRV3A	ICS100-CSV3A	ICS150-CRV3A	ICS150-CSV3A
		4 ~ 9 mm	Varifocal, auto iris	ICS100-CRV4A	ICS100-CSV4A	ICS150-CRV4A	ICS150-CSV4A
	Clear	2.9 mm	Fixed, without iris	ICS101-CR3	ICS101-CS3	ICS151-CR3	ICS151-CS3
		3.6 mm	Fixed, without iris	ICS101-CR3.6	ICS101-CS3.6	ICS151-CR3.6	ICS151-CS3.6
		6 mm	Fixed, without iris	ICS101-CR6	ICS101-CS6	ICS151-CR6	ICS151-CS6
			Fixed, auto iris	ICS101-CR6A	ICS101-CS6A	ICS151-CR6A	ICS151-CS6A
		8 mm	Fixed, without iris	ICS101-CR8	ICS101-CS8	ICS151-CR8	ICS151-CS8
			Fixed, auto iris	ICS101-CR8A	ICS101-CS8A	ICS151-CR8A	ICS151-CS8A
		12 mm	Fixed, without iris	ICS101-CR12	ICS101-CS12	ICS151-CR12	ICS151-CS12
			Fixed, auto iris	ICS101-CR12A	ICS101-CS12A	ICS151-CR12A	ICS151-CS12A
		3 ~ 6 mm	Varifocal, auto iris	ICS101-CRV3A	ICS101-CSV3A	ICS151-CRV3A	ICS151-CSV3A
		4 ~ 9 mm	Varifocal, auto iris	ICS101-CRV4A	ICS101-CSV4A	ICS151-CRV4A	ICS151-CSV4A



## SYSTEM MODELS, Color Camera

Camera Type	Lower Dome	Lens	Lens Type	Surface Mount (ICS100 Series)		In-Ceiling (ICS150 Series)	
				NTSC	PAL	NTSC	PAL
Color, Standard Resolution	Smoked	2.9 mm	Fixed, without iris	ICS100-CA3	ICS100-CC3	ICS150-CA3	ICS150-CC3
		3.6 mm	Fixed, without iris	ICS100-CA3.6	ICS100-CC3.6	ICS150-CA3.6	ICS150-CC3.6
		6 mm	Fixed, without iris	ICS100-CA6	ICS100-CC6	ICS150-CA6	ICS150-CC6
			Fixed, auto iris	ICS100-CA6A	ICS100-CC6A	ICS150-CA6A	ICS150-CC6A
		8 mm	Fixed, without iris	ICS100-CA8	ICS100-CC8	ICS150-CA8	ICS150-CC8
			Fixed, auto iris	ICS100-CA8A	ICS100-CC8A	ICS150-CA8A	ICS150-CC8A
	Clear	12 mm	Fixed, without iris	ICS100-CA12	ICS100-CC12	ICS150-CA12	ICS150-CC12
			Fixed, auto iris	ICS100-CA12A	ICS100-CC12A	ICS150-CA12A	ICS150-CC12A
		2.9 mm	Fixed, without iris	ICS101-CA3	ICS101-CC3	ICS151-CA3	ICS151-CC3
		3.6 mm	Fixed, without iris	ICS101-CA3.6	ICS101-CC3.6	ICS151-CA3.6	ICS151-CC3.6
		6 mm	Fixed, without iris	ICS101-CA6	ICS101-CC6	ICS151-CA6	ICS151-CC6
			Fixed, auto iris	ICS101-CA6A	ICS101-CC6A	ICS151-CA6A	ICS151-CC6A
		8 mm	Fixed, without iris	ICS101-CA8	ICS101-CC8	ICS151-CA8	ICS151-CC8
			Fixed, auto iris	ICS101-CA8A	ICS101-CC8A	ICS151-CA8A	ICS151-CC8A
		12 mm	Fixed, without iris	ICS101-CA12	ICS101-CC12	ICS151-CA12	ICS151-CC12
			Fixed, auto iris	ICS101-CA12A	ICS101-CC12A	ICS151-CA12A	ICS151-CC12A

## LENS PACK OPTIONS

Lens packs offer the added convenience of easily changing a camera's field of view by simply changing the lens.

All fixed focal length lenses without iris (2.9 mm to 12 mm) are interchangeable with any camera module. Fixed focal length auto iris and varifocal lenses are not interchangeable.

## Variety Pack\*

13FFD-V5PAK

Variety package of five lenses, one each  
2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm

## Single Lens Pack\*

13FF3D

2.9 mm lens and mount

13FF3.6D

3.6 mm lens and mount

13FF6D

6 mm lens and mount

13FF8D

8 mm lens and mount

13FF12D

12 mm lens and mount

## Four Lens Pack\*

13FF3D-4PAK

Package of four 2.9 mm lenses and mounts

13FF3.6D-4PAK

Package of four 3.6 mm lenses and mounts

13FF6D-4PAK

Package of four 6 mm lenses and mounts

\*Fixed focal length lenses, without auto iris.

## RECOMMENDED POWER SUPPLIES

(For use with 24 VAC models only)

TF2000

Power supply for one 24 VAC camera, 20 VA

MCS Series

Multiple 24 VAC camera power supply, indoor

MCS\*E Series

Multiple 24 VAC camera power supply, indoor

WCS Series

Single/multiple 24 VAC camera power supply, outdoor

## OPTIONAL MOUNTS

ICS100-AP

Adapter plate for a 4-square electrical box  
(ICS100 Series only)

ICS100-PG

Pendant mount adapter for ICS100 Series  
dome. Must be used with SWM-GY mount, or  
BB5-PCA-GY and conduit.

ICS150-P

2 x 2 ft (61 x 61 cm) metal ceiling panel for  
ICS150 Series in-ceiling dome.



**ICS100-PG SHOWN WITH  
ICS100 DOME AND  
SWM-GY MOUNT**



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## ICS200 Series Camclosure® Camera System

### INDOOR/OUTDOOR, WALL/CEILING

#### Product Features

- Fully-Integrated Enclosure With Camera and Lens Package
- Rugged, High-Impact and Vandal-Resistant
- Easy to Install; Camera Module Easy to Remove
- Mounts to Ceiling, Wall or Corner
- Tamper-Resistant Hardware
- Circuitry Protected Against Incorrect Jumper Placement
- Concealed Cabling
- 12 VDC or 24 VAC Operation
- Low-Temperature Operation to -50°F (-46°C);  
De-ices to -10°F (-23°C)
- Clear Window
- NTSC/PAL or EIA/CCIR Camera Formats
- All Color Cameras Feature Digital Signal Processing
- Color and Monochrome Cameras Available with 2.9 mm, 3.6 mm,  
6 mm, 8 mm, or 12 mm Fixed Focal Lenses
- Standard and High Resolution Color Cameras Available with Fixed  
Focal Auto Iris Lenses
- Varifocal Lenses of 3-6 mm or 4-9 mm with Auto Iris,  
Available with High Resolution Color Camera

The **ICS200 Series Camclosure® Integrated Camera System** incorporates a camera and lens package into a small, "wedge" style enclosure. The system is quick and easy to install in a variety of indoor or outdoor applications. It is ideal for residential, office, mall, hospital, school, parking garage, correction and detention, and other medium-security installations subject to vandalism.

The **ICS200 Series System** can be mounted directly to a wall, ceiling, or corner using the optional ICS200-CM Corner Mount. Installation options include using a fixed or adjustable mounting pattern. An adjustable pattern increases the pan adjustment 24 degrees.



- AC Line Lock with All Color Cameras in 24 VAC Operation
- All Lenses, Except Varifocals, are Pre-focused at the Factory
- Conduit Ready (3/4-inch NPT)

The **ICS200 Series Integrated Camera System** has a manual pan adjustment of  $\pm 10$  degrees and manual tilt adjustment of 5 degrees above horizontal to 20 degrees below horizontal. The unit is factory set for 24 VAC operation, but can be configured for 12 VDC with just a simple jumper adjustment.

Camera options include 1/3-inch format CCD color imager (standard or high resolution) and monochrome imager (standard resolution) with fixed focal length lenses of 2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm. Color camera lens options include fixed focal without iris, fixed focal with auto iris, or varifocal with auto iris. Cameras with a varifocal lens have a 1/4-inch format high resolution CCD color imager.



DataFAX  
SPEC: 22406  
MANUAL: 224066

C2406 / REVISED 10-03



U.S. Patent D-476,025

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

**ELECTRICAL**

Input Voltage	12 VDC or 24 VAC ( $\pm 10\%$ )
Power Consumption	
Camera	Less than 3 watts
Heaters	10 watts when active; thermostatically controlled
Video Connector	BNC

**GENERAL**

Cable Entry	One 3/4-inch (1.9 cm) threaded conduit opening on rear; One 5/8-inch (1.58 cm) opening through gasket on base
Pan/Tilt Adjustment	Manual $\pm 10^\circ$ pan; 5° above horizontal to 20° below horizontal tilt; additional 24° pan adjustment when installing using the adjustable mounting pattern in base

**ENVIRONMENTAL**

Environment	Low temperature, indoor/outdoor
Operating Temperature	-50° to 122°F (-46° to 50°C); de-ices to -10°F (-23°C)
Thermostat Operation	Heater is thermostatically controlled to activate on at 50°F (10°C) and off at 80°F (27°C)

**PHYSICAL**

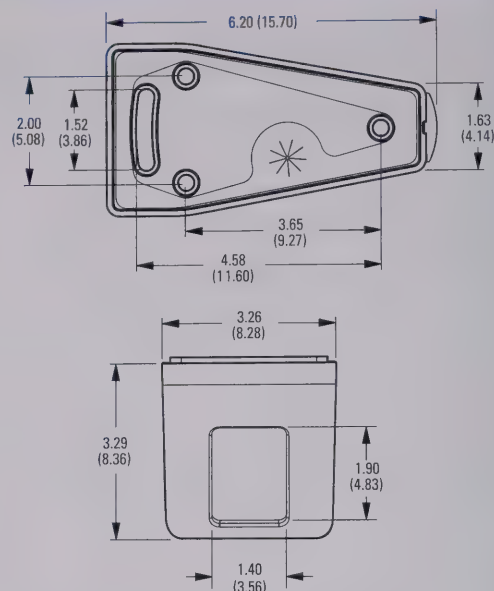
Construction	Aluminum base and cover, steel camera mounting bracket
Finish	Gray polyester powder coat
Unit Weight	1.25 lb (0.57 kg)
Shipping Weight	2.0 lb (0.90 kg)

**CERTIFICATIONS/RATINGS/PATENTS**

- CE and FCC, Class A (models with monochrome cameras only)
- CE and FCC, Class B (models with color cameras only)
- UL Listed
- UL Listed to Canadian safety standards
- Tested in accordance with MIL-STD 810E as follows:
  - Shock test; Section 516.4 (exceeds IEC 68-2-27)
  - Humidity test; Sections 520.1 and 507.3 (exceeds IEC 68-2-30)
  - Vibration test; Section 514.4 (exceeds IEC 68-2-6)
- ASTM Shipping Standard
- ISTA Shipping Standard

All tests are performed in accordance with ISO Guide 25 and ANSI/NCSL Z540-1.

- U.S. Patent D-475,025



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

**OPTIONAL MOUNT**

ICS200-CM

Corner mount specifically designed for the 200 Series system. Perfect for installing the ICS200 in a tight area such as a stairwell, hallway, or elevator.

**RECOMMENDED POWER SUPPLIES**

(For use with 24 VAC models only)

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
MCS*E Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## CAMERA SPECIFICATIONS

	<b>Black-White Standard Resolution Fixed, Without Iris</b> (Models ICSxxx-MAx/ ICSxxx-MCx)	<b>Color Standard Resolution Fixed, Without Iris</b> (Models ICSxxx-CAx/ ICSxxx-CCx)	<b>Color Standard Resolution Fixed, Auto Iris</b> (Models ICSxxx-CAxA/ ICSxxx-CCxA)	<b>Color High Resolution Fixed, Without Iris</b> (Models ICSxxx-CRx/ ICSxxx-CSx)	<b>Color High Resolution Fixed, Auto Iris</b> (Models ICSxxx-CRxA/ ICSxxx-CSxA)	<b>Color High Resolution Varifocal, Auto Iris</b> (Models ICSxxx-CRVxA/ ICSxxx-CSVxA)
Signal System Imaging Device	EIA or CCIR 1/3-inch CCD	NTSC or PAL 1/3-inch Interline Color CCD	NTSC or PAL 1/3-inch Interline Color CCD (Hyper HAD™)	NTSC or PAL 1/3-inch Interline Color CCD	NTSC or PAL 1/3-inch Interline Color CCD (Hyper HAD™)	NTSC or PAL 1/4-inch Interline Color CCD (Hyper HAD™)
Scanning System	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace
Sync System	Internal	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)
Horizontal Resolution	EIA: 420 TV lines CCIR: 420 TV lines	NTSC: 350 TV lines PAL: 350 TV lines	NTSC: 330 TV lines PAL: 320 TV lines	NTSC: 470 TV lines PAL: 460 TV lines	NTSC: 450 TV lines PAL: 440 TV lines	NTSC: 480 TV lines PAL: 480 TV lines
Signal-to-Noise Ratio	50 dB	48 dB	48 dB	48 dB	48 dB	48 dB (AGC Off)
Min. Illumination Sensitivity	0.1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	Less than 1.2 lux (f1.2)
Video Out	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)
Gain Control	Auto	Auto	Auto	NTSC: Auto PAL: Manual	Auto	On/Off by DIP switch (0-20 dB)
Exposure	Electronic Shutter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Automatic control w/DC Iris meter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Automatic Control w/DC Iris meter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)
White Balance	Not applicable	Auto	Auto	Auto	Auto	Auto or manual (switch selectable)
Backlight Compensation	Auto	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto; adjusts AGC and AES
Power Source*	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC

\*24 VAC power is recommended when installing any Camclosure® Integrated Camera System under fluorescent lighting conditions.

## LENS SPECIFICATIONS

Camera	Fixed Focal Without Iris								Varifocal With Auto Iris	
	Color	B-W	Color	B-W	Color	B-W	Color	B-W	Color	B-W
Focal Length	2.9 mm	3.0 mm	3.6 mm		6.0 mm		8.0 mm		12.0 mm	
Format Size	1/3-inch		1/3-inch		1/3-inch		1/3-inch		1/3-inch	
Relative Aperture (F)	2.0		2.0		1.8	2.5	1.8	2.5	2.0	
Operation Iris Focus Zoom	N/A Manual N/A		N/A Manual N/A		N/A Manual N/A		N/A Manual N/A		N/A Manual N/A	
Angle of View**										
Horizontal	90°	87°	74°		42°	38°	32°	29°	21°	
Diagonal	—	—	—	—	—	—	—	—	—	—
Vertical	69°	67°	55°		33°	30°	25°	23°	17°	

Camera	Fixed Focal With Auto Iris		
	Color	Color	Color
Focal Length	6.0 mm	8.0 mm	12.0 mm
Format Size	1/3-inch	1/3-inch	1/3-inch
Relative Aperture (F)	1.8	1.8	1.8
Operation Iris Focus Zoom	Auto Manual N/A	Auto Manual N/A	Auto Manual N/A
Angle of View**			
Horizontal	42°	32°	21°
Diagonal	—	—	—
Vertical	33°	25°	17°

\*\*Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.



## SYSTEM MODELS AND RELATED PRODUCTS

## ICS200 SERIES SYSTEM MODELS

Camera Type	Lens	Lens Type	NTSC	PAL	EIA	CCIR
Color, High Resolution	2.9 mm	Fixed, without iris	ICS200-CR3	ICS200-CS3	—	—
	3.6 mm	Fixed, without iris	ICS200-CR3.6	ICS200-CS3.6	—	—
	6 mm	Fixed, without iris	ICS200-CR6	ICS200-CS6	—	—
		Fixed, auto iris	ICS200-CR6A	ICS200-CS6A	—	—
	8 mm	Fixed, without iris	ICS200-CR8	ICS200-CS8	—	—
		Fixed, auto iris	ICS200-CR8A	ICS200-CS8A	—	—
	12 mm	Fixed, without iris	ICS200-CR12	ICS200-CS12	—	—
		Fixed, auto iris	ICS200-CR12A	ICS200-CS12A	—	—
	3-6 mm	Varifocal, auto iris	ICS200-CRV3A	ICS200-CSV3A	—	—
	4-9 mm	Varifocal, auto iris	ICS200-CRV4A	ICS200-CSV4A	—	—
Color, Standard Resolution	2.9 mm	Fixed, without iris	ICS200-CA3	ICS200-CC3	—	—
	3.6 mm	Fixed, without iris	ICS200-CA3.6	ICS200-CC3.6	—	—
	6 mm	Fixed, without iris	ICS200-CA6	ICS200-CC6	—	—
		Fixed, auto iris	ICS200-CA6A	ICS200-CC6A	—	—
	8 mm	Fixed, without iris	ICS200-CA8	ICS200-CC8	—	—
		Fixed, auto iris	ICS200-CA8A	ICS200-CC8A	—	—
	12 mm	Fixed, without iris	ICS200-CA12	ICS200-CC12	—	—
		Fixed, auto iris	ICS200-CA12A	ICS200-CC12A	—	—
B-W, Standard Resolution	3.0 mm	Fixed, without iris	—	—	ICS200-MA3	ICS200-MC3
	3.6 mm	Fixed, without iris	—	—	ICS200-MA3.6	ICS200-MC3.6
	6 mm	Fixed, without iris	—	—	ICS200-MA6	ICS200-MC6
	8 mm	Fixed, without iris	—	—	ICS200-MA8	ICS200-MC8
	12 mm	Fixed, without iris	—	—	ICS200-MA12	ICS200-MC12

## LENS PACK OPTIONS

Lens packs offer the added convenience of easily changing a camera's field of view by simply changing the lens.

All fixed focal lenses without iris (2.9 mm to 12 mm) are interchangeable with any camera module. Fixed focal auto iris and varifocal lenses are not interchangeable.

## Variety Pack\*

13FFD-V5PAK

Variety package of five lenses, one each  
2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm

## Single Lens Pack\*

13FF3D  
13FF3.6D  
13FF6D  
13FF8D  
13FF12D

2.9 mm lens and mount  
3.6 mm lens and mount  
6 mm lens and mount  
8 mm lens and mount  
12 mm lens and mount

## Four Lens Pack\*

13FF3D-4PAK  
13FF3.6D-4PAK  
13FF6D-4PAK

Package of four 2.9 mm lenses and mounts  
Package of four 3.6 mm lenses and mounts  
Package of four 6 mm lenses and mounts

\*Fixed focal lenses, without iris.



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## ICS300 Series Camclosure® Camera System

### INDOOR/OUTDOOR, WALL OR CEILING

#### Product Features

- Fully-Integrated Enclosure With Camera and Lens Package
- Rugged, Impact- and Vandal-Resistant
- Easy to Install
- Versatile, Aesthetically Pleasing "Track Light" Design, Mounts to Wall or Ceiling
- Tamper-Resistant Hardware
- Concealed Cabling
- 12 VDC or 24 VAC Operation
- Low-Temperature Operation to -50°F (-46°C); de-ices to -10°F (-23°C)
- Clear Viewing Window
- All Color Cameras Feature Digital Signal Processing
- Color and Monochrome Cameras Available with 2.9 mm, 3.6 mm, 6 mm, 8 mm, or 12 mm Fixed Focal Lenses
- Standard and High Resolution Color Cameras Available with Fixed Focal Auto Iris Lenses
- Varifocal Lenses of 3-6 mm or 4-9 mm with Auto Iris, Available with High Resolution Color Camera
- AC Line Lock with All Color Cameras in 24 VAC Operation
- All Lenses, Except Varifocals, are Pre-focused at the Factory
- Optional Conduit Adapter Available
- NTSC/PAL or EIA/CCIR Camera Formats



ICS300 SERIES

The **ICS300 Series Camclosure® Integrated Camera System** incorporates a camera and lens package into a small, unobtrusive, medium-security enclosure. The system is quick and easy to install in a variety of indoor or outdoor applications. It is ideal for residential, office, mall, hospital, school, parking garage, correction and detention, and other medium-security installations subject to vandalism.

The **ICS300 Series** can be equipped with three options. The ICS300-AP adapter plate allows adaption to a 2 gang electrical box, the ICS300-SS sun shroud helps shield the unit from sun in outdoor applications, and the ICS300-COND allows the unit to be used in applications requiring conduit.

All models are designed for either 12 VDC or 24 VAC operation. Each unit is provided with two quick-connect mating connectors with leads; one for 12 VDC and one for 24 VAC. Just select the appropriate connector for your application, wire the leads to your power source with wing nuts, and snap the connectors together — it's that simple!

Camera options include 1/3-inch format CCD color imager (standard or high resolution) and monochrome imager (standard resolution) with fixed focal length lenses of 2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm. Color camera lens options include fixed focal without iris, fixed focal with auto iris, or varifocal with auto iris. Cameras with a varifocal lens have a 1/4-inch format high resolution CCD color imager.



**DataFAX**  
**SPEC:** 22408  
**MANUAL:** 224086

C2408 / REVISED 10-03



U.S. Patent D-476,025

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## ELECTRICAL

Input Voltage	12 VDC or 24 VAC ( $\pm 10\%$ )
Camera	Less than 3 watts
Heaters	10 watts when active; thermostatically controlled
Video Connector	BNC

## GENERAL

Pan/Tilt Adjustment	Manual 180° pan; 180° tilt
Construction	Aluminum base and cover, steel camera mounting bracket

## ENVIRONMENTAL

Environment	Low temperature, indoor/outdoor
Operating Temperature	-50° to 122°F (-46° to 50°C); de-ices at -10°F (-23°C)
Thermostat Operation	Heater is thermostatically controlled to activate ON at 50°F (10°C) and OFF at 80°F (27°C)

## PHYSICAL

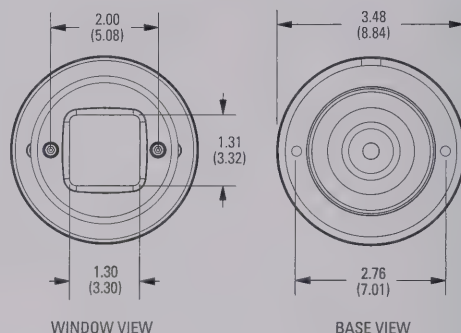
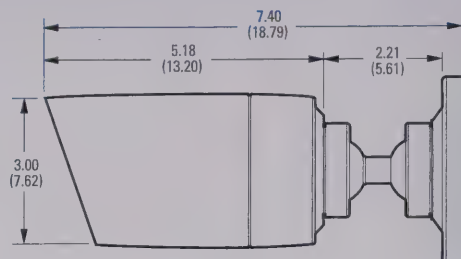
Finish	Gray polyester powder coat
Dimensions	
Camclosure	2.71 (diameter) x 7.79 (L) inches (6.88 x 19.79 cm)
Sun Shroud	2.60 (H) x 6.13 (L) inches (5.23 x 15.57 cm) Snap fit design mounts sun shroud to enclosure
Unit Weight	1.45 lb (0.66 kg)
Shipping Weight	2.0 lb (0.90 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE and FCC, Class A (models with monochrome cameras)
- CE and FCC, Class B (models with color cameras only)
- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 3R standards
- Tested in accordance with MIL-STD 810E as follows:
  - Shock test; Section 516.4 (exceeds IEC 68-2-27)
  - Humidity test; Sections 520.1 and 507.3 (exceeds IEC 68-2-30)
  - Vibration test; Section 514.4 (exceeds IEC 68-2-6)
- ASTM Shipping Standard
- ISTA Shipping Standard

All tests are performed in accordance with ISO Guide 25 and ANSI/NCSL Z540-1.

- U.S. Patent D-476,025



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## OPTIONAL MOUNT

ICS300-AP	Adapter plate for a 2-gang electrical box
ICS300-COND	Conduit adapter; can be adapted to any vertical or horizontal mounting surface
ICS300-SS	Sun shroud for outdoor applications

## RECOMMENDED POWER SUPPLIES

(For use with 24 VAC models only)

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
MCS*E Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## CAMERA SPECIFICATIONS

	<b>Black-White Standard Resolution Fixed, Without Iris</b> (Models ICSxxx- <b>MA</b> x/ ICSxxx- <b>MC</b> x)	<b>Color Standard Resolution Fixed, Without Iris</b> (Models ICSxxx- <b>CA</b> x/ ICSxxx- <b>CC</b> x)	<b>Color Standard Resolution Fixed, Auto Iris</b> (Models ICSxxx- <b>CA</b> x/ ICSxxx- <b>CC</b> xA)	<b>Color High Resolution Fixed, Without Iris</b> (Models ICSxxx- <b>CR</b> x/ ICSxxx- <b>CS</b> x)	<b>Color High Resolution Fixed, Auto Iris</b> (Models ICSxxx- <b>CR</b> xA/ ICSxxx- <b>CS</b> xA)	<b>Color High Resolution Varifocal, Auto Iris</b> (Models ICSxxx- <b>CRV</b> xA/ ICSxxx- <b>CSV</b> xA)
Signal System Imaging Device	EIA or CCIR 1/3-inch CCD	NTSC or PAL 1/3-inch Interline Color CCD	NTSC or PAL 1/3-inch Interline Color CCD (Hyper HAD™)	NTSC or PAL 1/3-inch Interline Color CCD	NTSC or PAL 1/3-inch Interline Color CCD (Hyper HAD™)	NTSC or PAL 1/4-inch Interline Color CCD (Hyper HAD™)
Scanning System	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace	2:1 Interlace
Sync System	Internal	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)	12 VDC: Internal 24 VAC: External (VD Lock)
Horizontal Resolution	EIA: 420 TV lines CCIR: 420 TV lines	NTSC: 350 TV lines PAL: 350 TV lines	NTSC: 330 TV lines PAL: 320 TV lines	NTSC: 470 TV lines PAL: 460 TV lines	NTSC: 450 TV lines PAL: 440 TV lines	NTSC: 480 TV lines PAL: 480 TV lines
Signal-to-Noise Ratio	50 dB	48 dB	48 dB	48 dB	48 dB	48 dB (AGC Off)
Min. Illumination Sensitivity	0.1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	1 lux (f2.0)	Less than 1.2 lux (f1.2)
Video Out	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)	1 Vp-p Composite (75 ohms)
Gain Control	Auto	Auto	Auto	NTSC: Auto PAL: Manual	Auto	On/Off by DIP switch (0-20 dB)
Exposure	Electronic Shutter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Automatic control w/DC Iris meter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)	Automatic Control w/DC Iris meter (1/60 - 1/100,000)	Electronic Shutter (1/60 - 1/100,000)
White Balance	Not applicable	Auto	Auto	Auto	Auto	Auto or manual (switch selectable)
Backlight Compensation	Auto	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto or manual (switch selectable)	Auto; adjusts AGC and AES
Power Source*	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC	12 VDC, 24 VAC

\*24 VAC power is recommended when installing any Camclosure® Integrated Camera System under fluorescent lighting conditions.

## LENS SPECIFICATIONS

Camera	Fixed Focal Without Iris										Varifocal With Auto Iris	
	Color	B-W	Color	B-W	Color	B-W	Color	B-W	Color	B-W	Color, High Resolution only	
Focal Length	2.9 mm	3.0 mm	3.6 mm		6.0 mm		8.0 mm		12.0 mm		3-6 mm	4-9 mm
Format Size	1/3-inch		1/3-inch		1/3-inch		1/3-inch		1/3-inch		1/4-inch	—
Relative Aperture (F)	2.0		2.0		1.8	2.5	1.8	2.5	2.0		1.2 to 1.5	1.6 to 2.4
Operation												
Iris	N/A		N/A		N/A		N/A		N/A		Auto	Auto Iris
Focus	Manual		Manual		Manual		Manual		Manual		Manual	Manual
Zoom	N/A		N/A		N/A		N/A		N/A		Manual	Manual
Angle of View**												
Horizontal	90°	87°	74°		42°	38°	32°	29°	21°		72° to 36°	51.8° to 23.8°
Diagonal	—	—	—	—	—	—	—	—	—	—	96° to 46°	66.1° to 29.7°
Vertical	69°	67°	55°		33°	30°	25°	23°	17°		52° to 26°	38.3° to 17.8°

Camera	Fixed Focal With Auto Iris		
	Color	Color	Color
Focal Length	6.0 mm	8.0 mm	12.0 mm
Format Size	1/3-inch	1/3-inch	1/3-inch
Relative Aperture (F)	1.8	1.8	1.8
Operation			
Iris	Auto	Auto	Auto
Focus	Manual	Manual	Manual
Zoom	N/A	N/A	N/A
Angle of View**			
Horizontal	42°	32°	21°
Diagonal	—	—	—
Vertical	33°	25°	17°

\*\*Focal length specifications presume a 10% horizontal and 4% vertical monitor overscan.



## ICS300 SERIES SYSTEM MODELS

Camera Type	Lens	Lens Type	NTSC	PAL	EIA	CCIR
Color, High Resolution	2.9 mm	Fixed, without iris	ICS300-CR3	ICS300-CS3	—	—
	3.6 mm	Fixed, without iris	ICS300-CR3.6	ICS300-CS3.6	—	—
	6 mm	Fixed, without iris	ICS300-CR6	ICS300-CS6	—	—
		Fixed, auto iris	ICS300-CR6A	ICS300-CS6A	—	—
	8 mm	Fixed, without iris	ICS300-CR8	ICS300-CS8	—	—
		Fixed, auto iris	ICS300-CR8A	ICS300-CS8A	—	—
	12 mm	Fixed, without iris	ICS300-CR12	ICS300-CS12	—	—
		Fixed, auto iris	ICS300-CR12A	ICS300-CS12A	—	—
	3-6 mm	Varifocal, auto iris	ICS300-CRV3A	ICS300-CSV3A	—	—
	4-9 mm	Varifocal, auto iris	ICS300-CRV4A	ICS300-CSV4A	—	—
Color, Standard Resolution	2.9 mm	Fixed, without iris	ICS300-CA3	ICS300-CC3	—	—
	3.6 mm	Fixed, without iris	ICS300-CA3.6	ICS300-CC3.6	—	—
	6 mm	Fixed, without iris	ICS300-CA6	ICS300-CC6	—	—
		Fixed, auto iris	ICS300-CA6A	ICS300-CC6A	—	—
	8 mm	Fixed, without iris	ICS300-CA8	ICS300-CC8	—	—
		Fixed, auto iris	ICS300-CA8A	ICS300-CC8A	—	—
	12 mm	Fixed, without iris	ICS300-CA12	ICS300-CC12	—	—
		Fixed, auto iris	ICS300-CA12A	ICS300-CC12A	—	—
B-W, Standard Resolution	3.0 mm	Fixed, without iris	—	—	ICS300-MA3	ICS300-MC3
	3.6 mm	Fixed, without iris	—	—	ICS300-MA3.6	ICS300-MC3.6
	6 mm	Fixed, without iris	—	—	ICS300-MA6	ICS300-MC6
	8 mm	Fixed, without iris	—	—	ICS300-MA8	ICS300-MC8
	12 mm	Fixed, without iris	—	—	ICS300-MA12	ICS300-MC12

## LENS PACK OPTIONS

Lens packs offer the added convenience of easily changing a camera's field of view by simply changing the lens.

All fixed focal lenses without iris (2.9 mm to 12 mm) are interchangeable with any camera module. Fixed focal auto iris and varifocal lenses are not interchangeable.

**Variety Pack\***

13FFD-V5PAK

Variety package of five lenses, one each  
2.9 mm, 3.6 mm, 6 mm, 8 mm, and 12 mm

\*Fixed focal lenses, without iris.

**Single Lens Pack\***

13FF3D  
13FF3.6D  
13FF6D  
13FF8D  
13FF12D

2.9 mm lens and mount  
3.6 mm lens and mount  
6 mm lens and mount  
8 mm lens and mount  
12 mm lens and mount

**Four Lens Pack\***

13FF3D-4PAK  
13FF3.6D-4PAK  
13FF6D-4PAK

Package of four 2.9 mm lenses and mounts  
Package of four 3.6 mm lenses and mounts  
Package of four 6 mm lenses and mounts

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[www.pelco.com](http://www.pelco.com)

Indicates change or addition.

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Camclosure® is a registered trademark of Pelco.  
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## Spectra III™ Series Dome Systems

### HIGH-PERFORMANCE INTEGRATED DOME SYSTEMS

#### Product Features

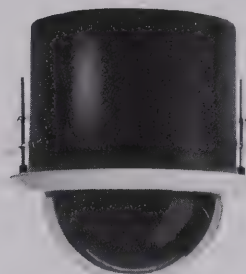
- Auto Focus, High-Resolution Integrated LowLight™ Color Camera/Optics Package
- 16X Optical and 8X Digital Zoom (128X Total)
- Zone Blanking
- RJ-45 Data Port for Software Upgrades
- On-Screen Compass and Tilt Display
- Multilanguage On-Screen Menus
- Password Protection
- Integral, Auto-Sensing, Multi-Protocol Receiver/Driver
- 5.9-inch Acrylic Bubble
- "Auto Flip" Dome Rotation
- Quick Disconnect Dome Drive
- One Pattern
- Built-in Surge and Limited Lightning Protection

The **Spectra III™ Series Dome System** is a cost-effective alternative to Pelco's popular Spectra III™ SE Series Dome System. The **Spectra III** features multiple back box configurations and a high-resolution LowLight™ Color dome drive with a 128X zoom lens, and programmable software.

The Integrated Dome System consists of a back box, dome drive, and lower dome. Components may be ordered as a complete system, or separately. This flexibility allows for future system upgrades. The **Spectra III** can be upgraded with the Spectra III SE dome drive, giving the system all the programmable features of the Spectra III SE, excluding built-in back box memory, relay and auxiliary functions.

In addition to indoor in-ceiling and indoor/outdoor pendant back boxes, two new back box models have been added to the **Spectra III** line: an environmental in-ceiling model for outdoor soffits and an indoor surface mount model that installs quickly and easily to any type of ceiling. All pendant and environmental in-ceiling models are environmentally sealed to meet IP66 and NEMA Type 4X standards.

The **Spectra III** dome systems feature many new software enhancements including password protection to prevent unauthorized users from changing dome drive settings.



IN-CEILING MODEL



ENVIRONMENTAL PENDANT  
MODEL SD53TC-PG-E0  
(SHOWN WITH SWM-GY WALL MOUNT)

- Optional UTP Video Converter
- Third-Party Fiber Modules
- Heavy-Duty and Stainless Steel Models Available

Other new features include on-screen compass and tilt display; multi-language menus programmable for English, Spanish, Portuguese, Italian, French and German; and an RJ-45 data port for software uploads and on-site setup and programming.

**Spectra III** variable speed capabilities range from a smooth, fast pan motion of 250 degrees per second to a smooth "creep" speed of 0.1 degree per second. The system is capable of 360 degrees rotation and has an "auto flip" feature that allows the dome to rotate 180 degrees and reposition itself for uninterrupted viewing of any subject that passes directly beneath the dome.

Optional diagnostic/installation tools include a remote monitor kit (**IPS-RMK**) and a remote monitor cable (**IPS-CABLE**). These accessories allow the installer to view video, control PTZ, and perform system setup and software upgrades at the installation site. The **IPS-RMK** is a stand-alone kit consisting of a 5.6-inch TFT-LCD monitor, Palm™ OS compatible handheld and interface cable, carrying case, and the remote monitor cable (**IPS-CABLE**).

Also available are video conversion modules for applications using unshielded twisted pair (UTP) and fiber. See **OPTIONAL ACCESSORIES** for information.



DataFAX  
SPEC: 22446  
MANUAL: See DataFAX Catalog #2

C2446 / REVISED 12-03

IP66



U.S. Patent 5,931,432

International Organization  
for Standardization  
Registered ISO 9001

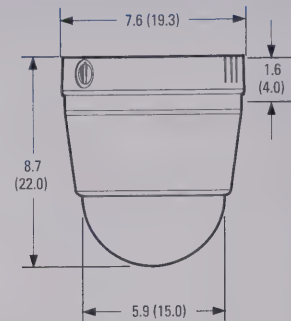




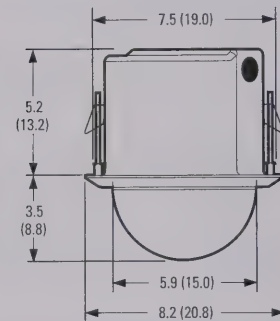
## COMPONENT FEATURES

**Surface Mount (Indoor), Back Box and Lower Dome**

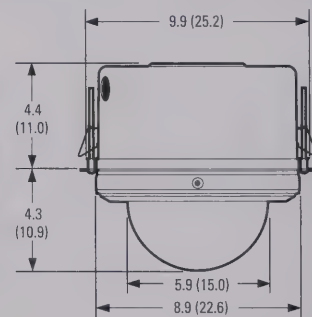
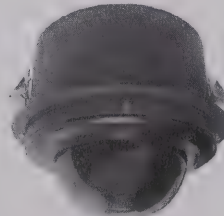
- Available in Black or White Finish
- Installs Quickly and Easily to Any Type of Ceiling
- Quick Disconnect to Dome Drive
- Injection-Molded Plastic
- 5.9-Inch Acrylic Bubble

**In-Ceiling (Indoor), Back Box and Lower Dome**

- Single Back Box for Suspended or Hard Ceiling Applications
- Requires 5.25-Inch Space Above Ceiling and 3.25 Inches Below
- 5.9-Inch Acrylic Bubble
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- Quick Disconnect to Dome Drive
- Meets NEMA Type 1, IP40 Standards
- Aluminum Construction
- Suitable for Use in Environmental Air Handling Spaces

**Environmental In-Ceiling, Back Box and Lower Dome**

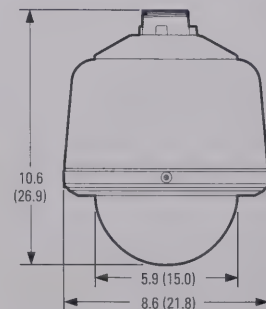
- Single Back Box for Hard Ceiling Applications
- Requires 4.4-Inch Space Above Ceiling and 4.3 Inches Below
- Includes Heater and Fan
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- 5.9-Inch Acrylic Bubble
- Quick Disconnect to Dome Drive
- Meets NEMA Type 4X, IP66 Standards
- Aluminum Construction

**Standard and Environmental Pendant, Back Box and Lower Dome**

- Standard and Environmental Models
- Standard Pendant Available in Black or Gray Finish; Environmental Pendant Gray Finish Only
- Quick Disconnect to Dome Drive
- Meets NEMA Type 4X, IP66 Standards
- Aluminum Construction
- 5.9-Inch Acrylic Bubble
- Environmental Model Includes Sun Shield, Fan, and Heater



(ENVIRONMENTAL DOME  
WITH SUN SHROUD SHOWN)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## Dome Drive

- 40 Presets with Camera Settings and Labels
- $\pm 0.25^\circ$  Preset Accuracy
- Multilanguage Menus (English, Spanish, Portuguese, Italian, French, and German)
- Alternate Language Files (includes Russian, Polish, Turkish, Czechoslovakian, and Dutch) Available as Optional Software Upload
- RJ-45 Data Port for Software Update and Setup
- On-Screen Compass, Tilt, and Zoom Display
- Password Protection
- $250^\circ/\text{sec}$  Pan Preset Speed and  $200^\circ/\text{sec}$  Tilt Preset Speed
- Rotating Discreet Liner with Sealed Fixed Bubble
- Eight Zones (programmable in size) Can Be Labeled with Up to 20 Characters Each or Set to Output Blank Video
- Programmable Locations of Labels and On-Screen Displays
- Patterns – One on-screen, user-defined programmable pattern. Includes pan, tilt, zoom, and preset functions
- Proportional Pan and Tilt – Continually decreases pan and tilt speeds in proportion to depth of zoom
- Variable Scan Speed – Scan speed can be programmable between  $1\text{--}40^\circ/\text{sec}$
- Pan Motion Allows  $0.1\text{--}150^\circ/\text{sec}$  Pan Speed
- Programmable Limit Stops for Auto/Random/Frame Scan Modes
- Auto-sensing Protocol (Coaxitron®, RS-422 P and D); Accepts Competitive Control Protocol with Optional Translator Card
- Digital Position and Zoom Control and Feedback Via D Protocol
- Built-in Menu System for Setup of Programmable Functions
- "Auto Flip" Rotates Dome  $180^\circ$  at Bottom of Tilt Travel
- Programmable Zoom Speeds

## GENERAL

Construction		
Back Box		
Surface Mount	Plastic	
In-ceiling	Aluminum	
Pendant	Aluminum	
Dome Drive	Aluminum, thermo plastic	
Bubble	Acrylic	
Light Attenuation		
Smoked	1/2 f-stop light loss	
Clear	Zero light loss	
Chrome	2 f-stops light loss	
Gold	2 f-stops light loss	
Cable Entry (Back Box)		
In-Ceiling and Surface Mount	0.75-inch conduit fitting	
Pendant	Through 1.5-inch NPT pendant mount	
Weight (approximate)	<u>Unit</u>	<u>Shipping</u>
Back Box		
Surface Mount	0.7 lb (0.32 kg)	2 lb (0.90 kg)
In-Ceiling	1.5 lb (0.68 kg)	2 lb (0.90 kg)
Environmental		
In-Ceiling	2.1 lb (0.95 kg)	3 lb (1.36 kg)
Pendant Indoor	2.4 lb (1.09 kg)	4 lb (1.81 kg)
Environmental Pendant	3.5 lb (1.59 kg)	5 lb (2.27 kg)
Dome Drive	2.4 lb (1.09 kg)	4 lb (1.81 kg)
Lower Dome		
Surface Mount	0.4 lb (0.18 kg)	1 lb (0.45 kg)
In-Ceiling	0.2 lb (0.09 kg)	1 lb (0.45 kg)
Pendant and Environmental		
In-Ceiling	0.6 lb (0.27 kg)	2 lb (0.90 kg)
Environment		
Surface Mount	Indoor	
In-Ceiling	Indoor	
Environmental In-Ceiling	Outdoor	
Pendant Standard and Environmental	Indoor/Outdoor	
Operating Temperature		
Surface Mount and In-Ceiling Indoor	32° to 122°F (0° to 50°C)	
Standard Pendant	(Assumes no wind chill factor)	
Maximum	113°F (45°C) absolute maximum; 95°F (35°C) sustained maximum	
Minimum	25°F (-4°C) sustained minimum	
Environmental		
In-Ceiling and Environmental Pendant	(Assumes no wind chill factor)	
Maximum	140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum	
Minimum	-60°F (-51°C) absolute minimum; prevents icing at sustained minimum of -50°F (-45°C); de-ices 0.1 inch (2.5 mm) within 3 hours after power-up	
Effective Projected Area (EPA)		
	~175 square inches	



## TECHNICAL SPECIFICATIONS

**MECHANICAL**

Pan Movement	360° continuous pan rotation
Vertical Tilt	Unobstructed +2° to -92°
Manual Pan/Tilt Speeds	
Pan	0.1°-80°/sec manual operation, 150°/sec Turbo
Tilt	0.1°-40°/sec manual operation
Preset Speeds	
Pan	250°/sec
Tilt	200°/sec
	For variable-speed operation an appropriate controller is required. (With non-variable speed control, Spectra III® pan/tilt speed is 20°/sec)

**ELECTRICAL**

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	25 VA nominal (without heater); 70 VA nominal (with heater)
Fuse	1.25A

**CERTIFICATIONS/RATINGS/PATENTS**

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- U.S. Patent 5,931,432

Meets the following standards:

- NEMA Type 4X, IP66 when installed properly (BB53T-F-E, BB53T-PB, BB53T-PG, and BB53T-PG-E)
- NEMA Type 1, IP40 (BB53T-SMW, BB53T-SMB and BB53T-F)

**OPTIONAL ACCESSORIES**

DD5-FM	Fixed camera mount adapter. Interchangeable with all Spectra III dome drives.
IPS-RMK	Remote monitor kit. Stand-alone kit consisting of a 5.6-inch TFT-LCD monitor, Palm™ OS compatible handheld, cables and carrying case. Allows viewing of camera video, local PTZ control, system setup, and system software upgrades at any installed dome.
IPS-CABLE	Remote monitor cable and software kit consisting of the Spectra III remote monitor interface cable and necessary software for use with a PC (Windows® 95, 98, Me, 2000), Palm™ OS compatible handheld or iPaq™ Series Pocket PC. See <a href="http://www.pelco.com">www.pelco.com</a> for a list of compatible devices.
IPS-RDPE-2	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming and Spectra III OS software upgrades when used with the IPS-RMK or IPS-CABLE.
TXB Series	Translator boards for AD Manchester, Philips (Burle), Sensormatic, and Vicon® protocols.
VC-UTP	Converts video for use with unshielded twisted pair (UTP); maximum distance to passive receiver 500 feet (152 m). Plugs into TXB connector in Spectra back box. Coaxitron-ready when used with passive receiver. Works with all major suppliers of UTP modules. Not for use in conjunction with TXB boards.

**FIBER COMPATIBLE PRODUCTS**

Fiber optic video transmitter/data receiver modules that plug directly into Spectra III SE and Spectra III back boxes are available through various manufacturers. Consult your fiber optics vendor for models and compatibility. Fiber optic modules cannot be used with TXB translator boards or VC-UTP.

**RECOMMENDED MOUNTS****Surface Mount Domes**

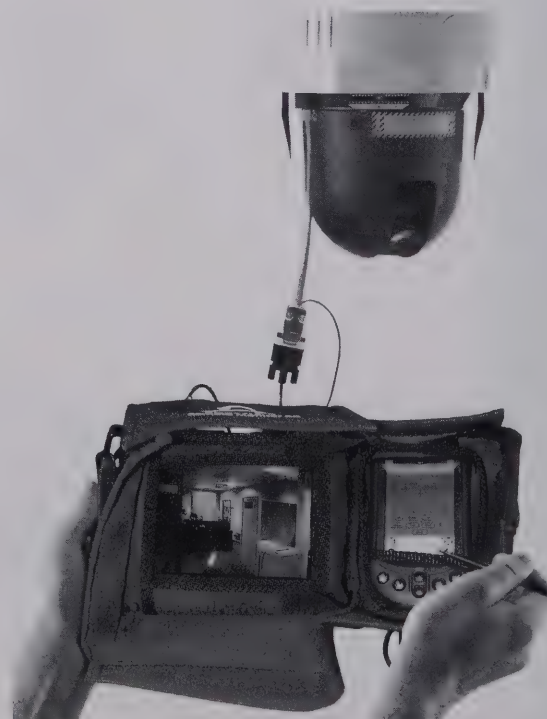
PASMB	Pendant adapter for surface mount dome, black
SD53SM-P	2' x 2' drop ceiling panel for BB53-SMW and BB53T-SMW series back boxes. Replaces 2' x 2' ceiling tile. Aluminum construction.

**In-Ceiling Domes**

SD5-P	2' x 2' drop ceiling panel, aluminum construction. Replaces 2' x 2' ceiling tile.
SCA1	Support rails for BB53-F; for use in ceiling tile applications.

**Pendant Domes**

BB5-PCA-BK	Pendant conduit adapter, black
BB5-PCA-GY	Pendant conduit adapter, gray
IWM Series	Wall mount, with or without integral 24 VAC, 100 VA transformer. Black or gray finish. Can be adapted for corner, parapet or pole applications.
MRCA	Ceiling mount, black
MRWA	Wall mount, black
PP4348	Parapet roof mount
PP350/PP351	Parapet wall/roof mount
SWM Series	Compact wall mount, black or gray finish. Can be adapted for corner or pole applications.



IPS-RMK REMOTE MONITOR KIT

## CAMERA/OPTICS

	DD53TC16	DD53TC16-X
Signal Format	NTSC	PAL
Scanning System	2:1 interlace	2:1 interlace
Image Sensor	1/4-inch interline transfer CCD	1/4-inch interline transfer CCD
Effective Pixels	768 (H) x 494 (V)	752 (H) x 582 (V)
Horizontal Resolution	470 TV lines	460 TV lines
Lens	f1.4 (f = 4-64 mm optical, 16X optical zoom, 8X electronic zoom)	f1.4 (f = 4-64 mm optical, 16X optical zoom, 8X electronic zoom)
Zoom Speeds (optical range)	1.9/3.6/6.0 seconds	1.9/3.6/6.0 seconds
Horizontal Angle of View	43° at 4 mm wide zoom; 3° at 64 mm telephoto zoom	43° at 4 mm wide zoom; 3° at 64 mm telephoto zoom
Focus	Automatic with manual override and preset capability	Automatic with manual override and preset capability
Maximum Sensitivity (35 IRE)	0.05 lux 1/2-second shutter speed	0.05 lux 1/1.5-second shutter speed
Sync System	AC line lock, phase adjustable via remote control, V-Sync	AC line lock, phase adjustable via remote control, V-Sync
White Balance	Automatic with manual override	Automatic with manual override
Shutter Speed	Automatic (electronic iris)/manual 1/2 - 1/30,000	Automatic (electronic iris)/manual 1/1.5 - 1/30,000
Iris Control	Automatic with manual override	Automatic with manual override
Gain Control	Automatic with manual override	Automatic with manual override
Video Output	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms
Signal to Noise Ratio	>46 dB	>46 dB



## SYSTEM MODELS AND RELATED PRODUCTS

## SYSTEM MODEL NUMBERS

Type	Back Box Color	Lower Dome	16X Color (NTSC)	16X Color (PAL)
Surface Mount	White	Smoked	SD53TC-SMW-0	SD53TC-SMW-0-X
		Clear	SD53TC-SMW-1	SD53TC-SMW-1-X
		Chrome	SD53TC-SMW-2	SD53TC-SMW-2-X
		Gold	SD53TC-SMW-3	SD53TC-SMW-3-X
	Black	Smoked	SD53TC-SMB-0	SD53TC-SMB-0-X
		Clear	SD53TC-SMB-1	SD53TC-SMB-1-X
		Chrome	SD53TC-SMB-2	SD53TC-SMB-2-X
		Gold	SD53TC-SMB-3	SD53TC-SMB-3-X
In-Ceiling, Indoor	Black	Smoked	SD53TC-F0	SD53TC-F0-X
		Clear	SD53TC-F1	SD53TC-F1-X
		Chrome	SD53TC-F2	SD53TC-F2-X
		Gold	SD53TC-F3	SD53TC-F3-X
In-Ceiling, Environmental**	Black	Smoked	SD53TC-F-E0	SD53TC-F-E0-X
		Clear	SD53TC-F-E1	SD53TC-F-E1-X
Pendant, Standard	Black	Smoked	SD53TC-PB-0	SD53TC-PB-0-X
		Clear	SD53TC-PB-1	SD53TC-PB-1-X
		Chrome	SD53TC-PB-2	SD53TC-PB-2-X
		Gold	SD53TC-PB-3	SD53TC-PB-3-X
	Lt. Gray	Smoked	SD53TC-PG-0	SD53TC-PG-0-X
		Clear	SD53TC-PG-1	SD53TC-PG-1-X
		Chrome	SD53TC-PG-2	SD53TC-PG-2-X
		Gold	SD53TC-PG-3	SD53TC-PG-3-X
Pendant, Environmental**	Lt. Gray	Smoked	SD53TC-PG-E0	SD53TC-PG-E0-X
		Clear	SD53TC-PG-E1	SD53TC-PG-E1-X

\*\*Environmental dome systems include a heater, fan, and the environmental pendant also includes a sun shield.

## COMPONENT MODEL NUMBERS

Back Box	Dome Drive	Lower Dome***
BB53T-SMB Surface mount, black	DD53TC16 Color (NTSC) camera	LD53SMB-0 Smoked, surface, black
BB53T-SMW Surface mount, white	DD53TC16-X Color (PAL) camera	LD53SMB-1 Clear, surface, black
BB53T-F In-ceiling, black	DD5-FM Removable fixed mount bracket only (camera and lens not included). Interchangeable with all Spectra III dome drives.	LD53SMB-2 Chrome, surface, black
BB53T-F-E In-ceiling, black, environmental		LD53SMB-3 Gold, surface, black
BB53T-PB Pendant mount, black, standard		LD53SMW-0 Smoked, surface, white
BB53T-PG Pendant mount, gray, standard		LD53SMW-1 Clear, surface, white
BB53T-PG-E Pendant mount, gray, environmental		LD53SMW-2 Chrome, surface, white
		LD53SMW-3 Gold, surface, white
		LD5F-0 Smoked, in-ceiling
		LD5F-1 Clear, in-ceiling
		LD5F-2 Chrome, in-ceiling
		LD5F-3 Gold, in-ceiling
		LD53PB-0 Smoked, pendant, black
		LD53PB-1 Clear, pendant, black
		LD53PB-2 Chrome, pendant, black****
		LD53PB-3 Gold, pendant, black****

**Notes:**

To order a fixed mount dome system refer to the component models above and select one each of the following: back box (BB53T-F), dome drive (DD5-FM), plus choice of lower dome (LD5F-0, LD5F-1, LD5F-2 or LD5F-3).

For environmental applications, you must order an environmental back box (BB53-F-E) or (BB53-PG-E).

DD5-FM is ideal for use with Pelco's CCC1370H-2, CCC1370H-2X, and MCC1370H-2 cameras with selected Pelco lenses.

\*\*\*Use the pendant lower domes with the environmental in-ceiling and environmental pendant back boxes.

\*\*\*\*Not recommended for outdoor use due to possible light reflections.

Indicates change or addition.

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[www.pelco.com](http://www.pelco.com)

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iPaq™ is a trademark of the Compaq Corporation.

Palm™ is a trademark of Palm, Inc.

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## Spectra III™ SE Series Dome Systems

### PREMIER INTEGRATED DOME SYSTEM

#### Product Features

- Three Auto Focus, High-Resolution Integrated Camera/Optics Packages; Five Back Box Models
- Color/Black-White, 80X Wide Dynamic Range, and Motion Detection (SD53CBW Series)
- Built-in Back Box Memory
- ExView HAD™ CCD (SD53M22 and SD53C22 Series)
- Window Blanking
- Horizontal and Zone Blanking
- RJ-45 Data Port for Software Update and Setup
- On-Screen Compass and Tilt Display
- Multilanguage On-Screen Menus
- Password Protection
- Freeze Frame During Presets
- 7 Alarm Inputs; 2 Programmable Auxiliary Outputs
- Built-in Surge and Limited Lightning Protection

**Spectra III SE** features multiple back box configurations and three auto focus, high-resolution dome drives with programmable software.

**Spectra III SE's** back box models feature built-in memory to store camera and location-specific dome settings, including labels, presets, patterns, and zones. These settings are automatically downloaded if a new dome drive is installed. Two new back box models have been added to the line: an environmental in-ceiling model for outdoor soffits and an indoor surface mount model that installs quickly and easily to any type of ceiling.

All cameras in **Spectra III SE** dome drives feature LowLight™ Technology. The color/black-white model features a 23X lens, built-in motion detection and 80X wide dynamic range imager. Two standard cameras, available in color or monochrome, feature 22X lens and Exview HAD™ imagers for increased sensitivity.

**Spectra III SE** dome systems feature many new software enhancements that increase performance and make programming and operation easy. Window blanking allows a user to program up to eight, four-sided, user-defined privacy areas. Password protection prevents unauthorized users from changing the system settings.



**SURFACE MOUNT MODEL**



**PENDANT MODEL**

- Optional UTP Video Converter
- Third-Party Fiber Modules
- Heavy-Duty and Stainless Steel Models Available

Other new features include an on-screen compass and tilt display; multilanguage menus programmable for English, Spanish, Portuguese, Italian, French, and German; and an RJ-45 data port for software uploads and on-site setup and programming.

**Spectra III SE's** variable speed capabilities range from a smooth, fast pan motion of 360 degrees per second to a smooth "creep" speed of 0.1 degree per second. The system is capable of 360 degrees rotation and has an "auto flip" feature that allows the dome to rotate 180 degrees and reposition itself for uninterrupted viewing of any subject that passes directly beneath the dome.

Optional diagnostic/installation tools include a remote monitor kit (**IPS-RMK**) and a remote monitor cable (**IPS-CABLE**). These accessories allow the installer to view video, control PTZ, and perform system setup and software upgrades at the installation site. The **IPS-RMK** is a stand-alone kit consisting of a 5.6-inch TFT-LCD monitor, Palm™ OS compatible handheld and interface cable, carrying case, and the remote monitor cable (**IPS-CABLE**).

Also available are video conversion modules for applications using unshielded twisted pair (UTP) and fiber. See **OPTIONAL ACCESSORIES** for information.



**DataFAX**  
**SPEC:** 22440  
**MANUAL:** See DataFAX Catalog #2

C2440 / REVISED 12-03

IP66



U.S. Patent 5,931,432

International Organization  
for Standardization  
Registered ISO 9001

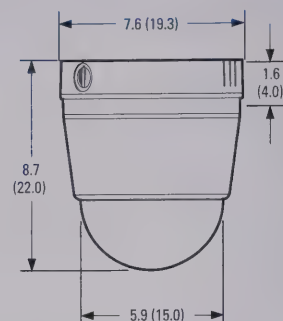
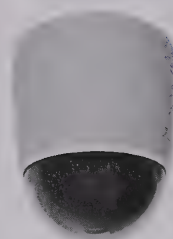




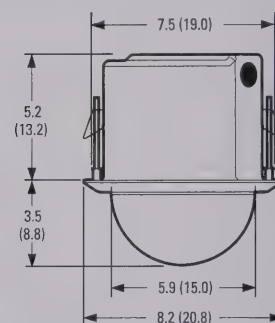
## COMPONENT FEATURES

**Surface Mount (Indoor), Back Box and Lower Dome**

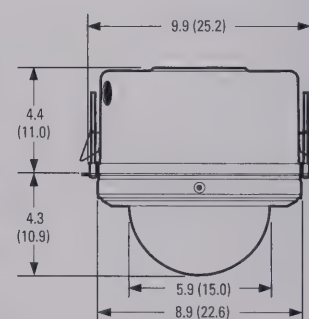
- Built-in Memory Stores Camera/Dome Settings
- Available in Black or White Finish
- Installs Quickly and Easily to Any Type of Ceiling
- Quick Disconnect to Dome Drive
- Injection-Molded Plastic
- 5.9-Inch Acrylic Bubble

**In-Ceiling (Indoor), Back Box and Lower Dome**

- Built-in Memory Stores Camera/Dome Settings
- Single Back Box for Suspended or Hard Ceiling Applications
- Requires 5.25-Inch Space Above Ceiling and 3.25 Inches Below
- 5.9-Inch Acrylic Bubble
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- Quick Disconnect to Dome Drive
- Meets NEMA Type 1, IP40 Standards
- Aluminum Construction
- Suitable for Use in Environmental Air Handling Spaces

**Environmental In-Ceiling, Back Box and Lower Dome**

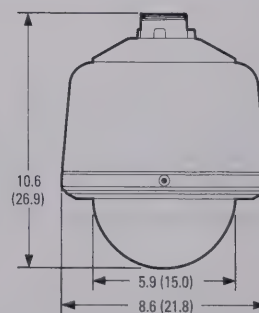
- Built-in Memory Stores Camera/Dome Settings
- Single Back Box for Hard Ceiling Applications
- Requires 4.4-Inch Space Above Ceiling and 4.3 Inches Below
- Includes Heater and Fan
- Minimum Ceiling Thickness 0.5-Inch; Maximum 1.75 Inches
- 5.9-Inch Acrylic Bubble
- Quick Disconnect to Dome Drive
- Meets NEMA Type 4X, IP66 Standards
- Aluminum Construction

**Standard and Environmental Pendant, Back Box and Lower Dome**

- Standard and Environmental Models
- Built-in Memory Stores Camera/Dome Settings
- Standard Pendant Available in Black or Gray Finish; Environmental Pendant Gray Finish Only
- Quick Disconnect to Dome Drive
- Meets NEMA Type 4X, IP66 Standards
- Aluminum Construction
- 5.9-Inch Acrylic Bubble
- Environmental Model Includes Sun Shield, Fan, and Heater



(ENVIRONMENTAL DOME  
WITH SUN SHROUD SHOWN)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

## Dome Drive

- 80 Presets with Camera Settings and Labels
- $\pm 0.1^\circ$  Preset Accuracy
- Multilanguage Menus (English, Spanish, Portuguese, Italian, French, and German)
- Alternate Language Files (includes Russian, Polish, Turkish, Czechoslovakian, and Dutch) Available as Optional Software Upload
- RJ-45 Data Port for Software Update and Setup
- On-Screen Compass, Tilt, and Zoom Display
- Password Protection
- $360^\circ/\text{sec}$  Pan Preset Speed and  $200^\circ/\text{sec}$  Tilt Preset Speed
- Rotating Discreet Liner with Sealed Fixed Bubble
- Window Blanking – Up to Eight, Four-Sided, User-Defined Shapes
- Eight Zones (programmable in size) Can Be Labeled with Up to 20 Characters Each or Set to Output Blank Video
- Seven Alarm Inputs
- One Auxiliary (Form C) Relay Output and One Open Collector Auxiliary Output (can be alternately programmed to operate upon alarm)
- Programmable Locations of Labels and On-Screen Displays
- Action on Alarm – Alarms can be individually programmed for three priority levels, to initiate a stored pattern, or to go to an associated preset when received
- Resume After Alarm – Allows the dome to return to a previously programmed state after alarm acknowledgement or to its previous position before alarm
- Patterns – Up to four, on-screen, user-defined programmable patterns. Includes pan, tilt, zoom, and preset functions
- Proportional Pan and Tilt – Continually decreases pan and tilt speeds in proportion to depth of zoom
- Variable Scan Speed – Scan speed can be programmable between  $1\text{-}40^\circ/\text{sec}$
- Pan Motion Allows  $0.1\text{-}150^\circ/\text{sec}$  Pan Speed
- Programmable Limit Stops for Auto/Random/Frame Scan Modes
- Auto-sensing Protocol (Coaxitron®, RS-422 P and D); Accepts Competitive Control Protocol with Optional Translator Card
- Digital Position and Zoom Control and Feedback Via D Protocol
- Built-in Menu System for Setup of Programmable Functions
- "Auto Flip" Rotates Dome  $180^\circ$  at Bottom of Tilt Travel
- Programmable Zoom Speeds

## GENERAL

### Construction

Back Box	Plastic
Surface Mount	Aluminum
In-ceiling	Aluminum
Pendant	Aluminum, thermo plastic
Dome Drive	Aluminum, thermo plastic
Bubble	Acrylic

### Light Attenuation

Smoked	1/2 f-stop light loss
Clear	Zero light loss
Chrome	2 f-stops light loss
Gold	2 f-stops light loss

### Cable Entry (Back Box)

In-Ceiling and Surface Mount	0.75-inch conduit fitting
Pendant	Through 1.5-inch NPT pendant mount
Weight (approximate)	<u>Unit</u> <u>Shipping</u>

Back Box		
Surface Mount	0.7 lb (0.32 kg)	2 lb (0.90 kg)
In-Ceiling	1.5 lb (0.68 kg)	2 lb (0.90 kg)
Environmental		
In-Ceiling	2.1 lb (0.95 kg)	3 lb (1.36 kg)
Pendant Indoor	2.4 lb (1.09 kg)	4 lb (1.81 kg)
Environmental Pendant	3.5 lb (1.59 kg)	5 lb (2.27 kg)
Dome Drive	2.4 lb (1.09 kg)	4 lb (1.81 kg)

Lower Dome		
Surface Mount	0.4 lb (0.18 kg)	1 lb (0.45 kg)
In-Ceiling	0.2 lb (0.09 kg)	1 lb (0.45 kg)
Pendant and Environmental		
In-Ceiling	0.6 lb (0.27 kg)	2 lb (0.90 kg)

### Environment

Surface Mount	Indoor
In-Ceiling	Indoor
Environmental In-Ceiling	Outdoor
Pendant Standard and Environmental	Indoor/Outdoor

### Operating Temperature

Surface Mount and In-Ceiling Indoor	32° to 122°F (0° to 50°C)
Standard Pendant	(Assumes no wind chill factor)
Maximum	113°F (45°C) absolute maximum;
	95°F (35°C) sustained maximum
Minimum	25°F (-4°C) sustained minimum

Minimum Environmental	
In-Ceiling and Environmental Pendant	(Assumes no wind chill factor)
Maximum	140°F (60°C) absolute maximum;
	122°F (50°C) sustained maximum
	-60°F (-51°C) absolute minimum; prevents
	icing at sustained minimum of -50°F (-45°C);
	de-ices 0.1 inch (2.5 mm) within 3 hours after
	power-up

### Effective Projected Area (EPA)

~175 square inches



## TECHNICAL SPECIFICATIONS

## MECHANICAL

Pan Movement	<i>(Dome Drive Only)</i> 360° continuous pan rotation
Vertical Tilt	Unobstructed +2° to -92°
Manual Pan/Tilt Speeds	
Pan	0.1°-80°/sec manual operation, 150°/sec Turbo
Tilt	0.1°-40°/sec manual operation
Preset Speeds	
Pan	360°/sec
Tilt	200°/sec
	For variable-speed operation an appropriate controller is required. (With non-variable speed control, Spectra III® pan/tilt speed is 20°/sec)

## ELECTRICAL

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	25 VA nominal (without heater); 70 VA nominal (with heater)
Fuse	1.25A
Auxiliary Outputs	2
Alarm Inputs	7

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- U.S. Patent 5,931,432

Meets the following standards:

- NEMA Type 4X, IP66 when installed properly (BB53-F-E, BB53-PB, BB53-PG, and BB53-PG-E)
- NEMA Type 1, IP40 (BB53-SMW, BB53-SMB and BB53-F)

## OPTIONAL ACCESSORIES

DD5-FM	Fixed camera mount adapter. Interchangeable with all Spectra III dome drives.
IPS-RMK	Remote monitor kit. Stand-alone kit consisting of a 5.6-inch TFT-LCD monitor, Palm™ OS compatible handheld, cables and carrying case. Allows viewing of camera video, local PTZ control, system setup, and system software upgrades at any installed dome.
IPS-CABLE	Remote monitor cable and software kit consisting of the Spectra III remote monitor interface cable and necessary software for use with a PC (Windows® 95, 98, Me, 2000), Palm™ OS compatible handheld or iPaq™ Series Pocket PC. See <a href="http://www.pelco.com">www.pelco.com</a> for a list of compatible devices.
IPS-RDPE-2	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming and Spectra III OS software upgrades when used with the IPS-RMK or IPS-CABLE.
TXB Series	Translator boards for AD Manchester, Philips (Burle), Sensomatic and Vicon® protocols.
VC-UTP	Converts video for use with unshielded twisted pair (UTP); maximum distance to passive receiver 500 feet (152 m). Plugs into TXB connector in Spectra back box. Coaxitron-ready when used with passive receiver. Works with all major suppliers of UTP modules. Not for use in conjunction with TXB boards.

## FIBER COMPATIBLE PRODUCTS

Fiber optic video transmitter/data receiver modules that plug directly into Spectra III SE and Spectra III back boxes are available through various manufacturers. Consult your fiber optics vendor for models and compatibility. Fiber optic modules cannot be used with TXB translator boards or VC-UTP.

## RECOMMENDED MOUNTS

## Surface Mount Domes

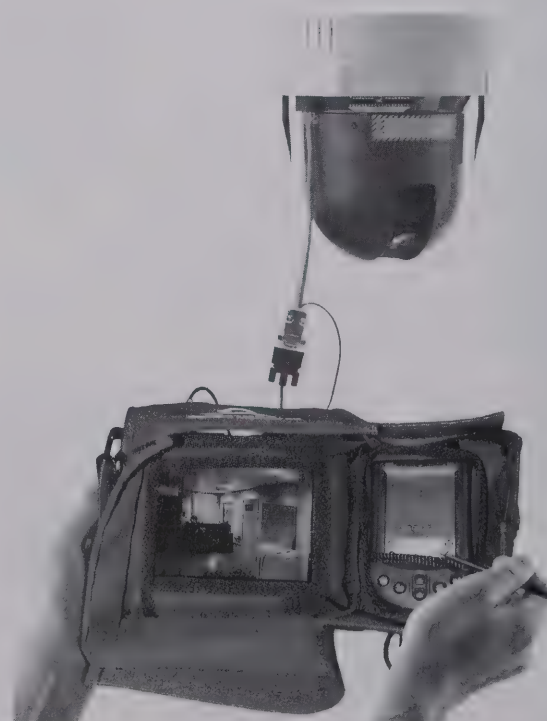
PASMB	Pendant adapter for surface mount dome, black
SD53SM-P	2' x 2' drop ceiling panel for BB53-SMW and BB53T-SMW series back boxes. Replaces 2' x 2' ceiling tile. Aluminum construction.

## In-Ceiling Domes

SD5-P	2' x 2' drop ceiling panel, aluminum construction. Replaces 2' x 2' ceiling tile.
SCA1	Support rails for BB53-F; for use in ceiling tile applications.

## Pendant Domes

BB5-PCA-BK	Pendant conduit adapter, black
BB5-PCA-GY	Pendant conduit adapter, gray
IWM Series	Wall mount, with or without integral 24 VAC, 100 VA transformer. Black or gray finish. Can be adapted for corner, parapet or pole applications.
MRCA	Ceiling mount, black
MRWA	Wall mount, black
PP4348	Parapet roof mount
PP350/PP351	Parapet wall/roof mount
SWM Series	Compact wall mount, black or gray finish. Can be adapted for corner or pole applications.



IPS-RMK REMOTE MONITOR KIT

## CAMERA/OPTICS

	Color/Black-White (23X)	Color (22X)	Monochrome (22X)
Signal Format	NTSC (DD53CBW) PAL (DD53CBW-X)	NTSC (DD53C22) PAL (DD53C22-X)	EIA (DD53M22) CCIR (DD53M22-X)
Scanning System	Progressive (2:1 Interlace output)	2:1 Interlace	2:1 Interlace
Image Sensor	1/4-inch CCD	1/4-inch EXview HAD™ CCD	1/4-inch EXview HAD™ CCD
Effective Pixels			
NTSC	724 (H) X 494 (V)	768 (H) X 494 (V)	768 (H) X 494 (V)
PAL	724 (H) X 582 (V)	752 (H) X 582 (V)	752 (H) X 582 (V)
Horizontal Resolution			
NTSC	>470 TV Lines	>470 TV Lines	>500 TV Lines
PAL	>470 TV Lines	>460 TV Lines	>500 TV Lines
Lens	F1.6 (f = 3.6–82.8 mm optical)	F1.6 (f = 4–88 mm optical)	F1.6 (f = 4–88 mm optical)
Zoom	23X optical, 10X electronic	22X optical, 12X electronic	22X optical, 12X electronic
Zoom Speed (optical range)	2.9/4.2/5.8 seconds	2.4/3.9/6.3 seconds	2.4/3.9/6.3 seconds
Horizontal Angle of view	54° at 3.6 mm wide zoom; 2.5° at 82.8 mm telephoto zoom	47° at 4.0 mm wide zoom; 2.2° at 88 mm telephoto zoom	47° at 4.0 mm wide zoom; 2.2° at 88 mm telephoto zoom
Focus	Automatic with manual override	Automatic with manual override	Automatic with manual override
Maximum Sensitivity @35 IRE			
NTSC/EIA	0.08 lux at 1/2 sec (color) 0.3 lux at 1/60 sec shutter (B-W) 0.013 lux at 1/2 sec (B-W)	0.02 lux at 1/2 sec shutter	0.005 lux at 1/2 sec shutter
PAL/CCIR	0.08 lux at 1/1.5 sec (color) 0.3 lux at 1/50 sec shutter (B-W) 0.013 lux at 1/1.5 sec (B-W)	0.02 lux at 1/1.5 sec shutter	0.005 lux at 1/1.5 sec shutter
Sync System	Internal/AC line lock, phase adjustable via remote control, V-Sync	Internal/AC line lock, phase adjustable via remote control, V-Sync	Internal/AC line lock, phase adjustable via remote control, V-sync
White Balance	Automatic with manual override	Automatic with manual override	—
Shutter Speed			
NTSC	Automatic (electronic iris)/Manual 1/2 ~1/30,000	Automatic (electronic iris)/Manual 1/2 ~1/30,000	Automatic (electronic iris)/Manual 1/2 ~1/30,000
PAL	1/1.5 ~1/30,000	1/1.5 ~1/30,000	1/1.5 ~1/30,000
Iris Control	Automatic Iris Control with manual override	Automatic Iris Control with manual override	Automatic Iris Control with manual override
Gain Control	Automatic/OFF	Automatic/OFF	Automatic/OFF
Video Output	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms
Video Signal to Noise	>50 dB	>48 dB	>48 dB
Wide Dynamic Range	80X	—	—

### WINDOW BLANKING

Window blanking allows a user to program up to eight, four-sided, user-defined areas that cannot be viewed by the operator of the dome system. A blanked area will move with pan and tilt functions and automatically adjust in size as the lens zooms telephoto and wide.



BEFORE



AFTER



BEFORE



AFTER

### WIDE DYNAMIC RANGE

The Wide Dynamic Range (WDR) setting balances the brightest and darkest sections of a scene to produce a picture that provides more detail. The range from the darkest to the brightest sections of the scene is 80X more when WDR is ON than when OFF.



## SYSTEM MODELS AND RELATED PRODUCTS

## SYSTEM MODEL NUMBERS

Type	Back Box Color	Lower Dome	23X Color/B-W*	22X Color*	22X Monochrome*
Surface Mount	White	Smoked	SD53CBW-SMW-0	SD53C22-SMW-0	SD53M22-SMW-0
		Clear	SD53CBW-SMW-1	SD53C22-SMW-1	SD53M22-SMW-1
		Chrome	SD53CBW-SMW-2	SD53C22-SMW-2	SD53M22-SMW-2
		Gold	SD53CBW-SMW-3	SD53C22-SMW-3	SD53M22-SMW-3
	Black	Smoked	SD53CBW-SMB-0	SD53C22-SMB-0	SD53M22-SMB-0
		Clear	SD53CBW-SMB-1	SD53C22-SMB-1	SD53M22-SMB-1
		Chrome	SD53CBW-SMB-2	SD53C22-SMB-2	SD53M22-SMB-2
		Gold	SD53CBW-SMB-3	SD53C22-SMB-3	SD53M22-SMB-3
In-Ceiling, Indoor	Black	Smoked	SD53CBW-F0	SD53C22-F0	SD53M22-F0
		Clear	SD53CBW-F1	SD53C22-F1	SD53M22-F1
		Chrome	SD53CBW-F2	SD53C22-F2	SD53M22-F2
		Gold	SD53CBW-F3	SD53C22-F3	SD53M22-F3
In-Ceiling, Environmental**	Black	Smoked	SD53CBW-F-E0	SD53C22-F-E0	SD53M22-F-E0
		Clear	SD53CBW-F-E1	SD53C22-F-E1	SD53M22-F-E1
Pendant, Standard	Black	Smoked	SD53CBW-PB-0	SD53C22-PB-0	SD53M22-PB-0
		Clear	SD53CBW-PB-1	SD53C22-PB-1	SD53M22-PB-1
		Chrome	SD53CBW-PB-2	SD53C22-PB-2	SD53M22-PB-2
		Gold	SD53CBW-PB-3	SD53C22-PB-3	SD53M22-PB-3
	Lt. Gray	Smoked	SD53CBW-PG-0	SD53C22-PG-0	SD53M22-PG-0
		Clear	SD53CBW-PG-1	SD53C22-PG-1	SD53M22-PG-1
		Chrome	SD53CBW-PG-2	SD53C22-PG-2	SD53M22-PG-2
		Gold	SD53CBW-PG-3	SD53C22-PG-3	SD53M22-PG-3
Pendant, Environmental**	Lt. Gray	Smoked	SD53CBW-PG-E0	SD53C22-PG-E0	SD53M22-PG-E0
		Clear	SD53CBW-PG-E1	SD53C22-PG-E1	SD53M22-PG-E1

\*For PAL and CCIR models add "-X" suffix to part number. (Example: SD53C22-PG-E0-X)

\*\*Environmental dome systems include a heater, fan, and the environmental pendant also includes a sun shield.

## COMPONENT MODEL NUMBERS

Back Box	Dome Drive	Lower Dome***
BB53-SMB Surface mount, black	DD53CBW Color/B-W (NTSC) camera (230X)	LD53SMB-0 Smoked, surface, black
BB53-SMW Surface mount, white	DD53CBW-X Color/B-W (PAL) camera (230X)	LD53SMB-1 Clear, surface, black
BB53-F In-ceiling, black	DD53C22 Color (NTSC) camera (264X)	LD53SMB-2 Chrome, surface, black
BB53-F-E In-ceiling, black, environmental	DD53C22-X Color (PAL) camera (264X)	LD53SMB-3 Gold, surface, black
BB53-PB Pendant mount, black, standard	DD53M22 Monochrome (EIA) camera (264X)	LD53SMW-0 Smoked, surface, white
BB53-PG Pendant mount, gray, standard	DD53M22-X Monochrome (CCIR) camera (264X)	LD53SMW-1 Clear, surface, white
BB53-PG-E Pendant mount, gray, environmental	DD5-FM Removable, fixed mount bracket only (camera and lens not included). Interchangeable with all Spectra III dome drives.	LD53SMW-2 Chrome, surface, white
		LD53SMW-3 Gold, surface, white
		LD5F-0 Smoked, in-ceiling
		LD5F-1 Clear, in-ceiling
		LD5F-2 Chrome, in-ceiling
		LD5F-3 Gold, in-ceiling
		LD53PB-0 Smoked, pendant, black
		LD53PB-1 Clear, pendant, black
		LD53PB-2 Chrome, pendant, black****
		LD53PB-3 Gold, pendant, black****

**Notes:**

To order a fixed mount dome system refer to the component models above and select one each of the following: back box (BB53-F), dome drive (DD5-FM), plus choice of lower dome (LD5F-0, LD5F-1, LD5F-2 or LD5F-3).

For environmental applications, you must order an environmental back box (BB53-F-E) or (BB53-PG-E).

DD5-FM is ideal for use with Pelco's CCC1370H-2, CCC1370H-2X, and MCC1370H-2 cameras with selected Pelco lenses.

\*\*\*Use the pendant lower domes with the environmental in-ceiling and environmental pendant back boxes.

\*\*\*\*Not recommended for outdoor use due to possible light reflections.

Indicates change or addition.

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## Heavy-Duty Spectra III™ Series BACK BOX AND LOWER DOME

### Product Features

- Tough, Heavy-Duty Construction
- Improved Bubble Design
  - 0.090-Inch Injection Molded Polycarbonate
  - Increased Optical Clarity
  - 3.5 X Stronger Than Previous Heavy-Duty Bubbles
- Trim Rings – Thick Aluminum Construction
- Protective Cage for Lower Dome (Optional)
- Built-in Back Box Memory
- 2 Auxiliary Outputs
- 7 Alarm Inputs
- Compatible with All Spectra III SE and Spectra III Dome Drives
- In-Ceiling and Pendant Models Available
- Indoor/Outdoor Applications
- Pendant Models Meet NEMA Type 4X and IP66 Standards
- Easy to Install



**IN-CEILING MODEL  
BB53HD-F AND LD53HDF-1**



**ENVIRONMENTAL PENDANT  
BB53HD-PG-E AND LD53HDCPB-1  
(SHOWN WITH IWM-GY WALL MOUNT)**

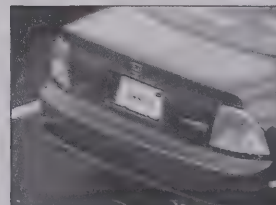
Pelco's **Heavy-Duty Spectra III™** is ideal for installations where structural integrity and resistance to vandalism are a priority. Dual wall construction, added thickness, and a geometric design enhance the overall durability of the enclosure.

Three **Heavy-Duty Spectra III** back box models are available. The in-ceiling model (BB53HD-F) has a reinforced mounting system for added security. The indoor pendant (BB53HD-PG) and environmental pendant (BB53HD-PG-E) models are strengthened by a thick shroud and dual wall construction, and meet NEMA Type 4X and IP66 standards. The environmental pendant includes a heater and fan.

The **Heavy-Duty Spectra III** has all the features of the Spectra III SE dome system (built-in back box memory, two auxiliary outputs, seven alarm inputs) and is also compatible with all Spectra III SE and Spectra III dome drives.

The lower dome of the **Heavy-Duty Spectra III** meets Pelco's stringent standards for optical clarity and strength. The lower dome features a 0.090-inch polycarbonate bubble that is 3.5 times stronger than previous heavy-duty bubbles. The trim ring is all aluminum construction with two barrel-type key locks to increase the tamper resistance of the unit.

For installations that face the highest threat of vandalism, models are available with a protective cage (optional). The cage is designed to increase the protection of the unit's bubble with minimal obstruction of the viewed scene. The camera automatically focuses through the cage's bars at medium to high zoom settings, eliminating interference (as shown below). The cage is removable for cleaning purposes. Cage hardware is only accessible when the lower dome is removed.



**DataFAX**  
**SPEC:** 22429  
**MANUAL:** 224656 (In-ceiling), 224666 (Pendant)

C2429 / REVISED 10-03

IP66



U.S. Patents D-457,904 and D-460,978

International Organization  
for Standardization  
Registered ISO 9001





## SYSTEM MODEL NUMBERS

Back Box Type	Lower Dome	Cage	SPECTRA III	SPECTRA III SE		
			16X Color*	23X Color/B-W*	22X Color*	22X Monochrome*
In-Ceiling	Clear	No	SD53TC-HF1	SD53CBW-HF1	SD53C22-HF1	SD53M22-HF1
		Yes	SD53TC-HCF1	SD53CBW-HCF1	SD53C22-HCF1	SD53M22-HCF1
Indoor Pendant		No	SD53TC-HP1	SD53CBW-HP1	SD53C22-HP1	SD53M22-HP1
		Yes	SD53TC-HCP1	SD53CBW-HCP1	SD53C22-HCP1	SD53M22-HCP1
Environmental Pendant		No	SD53TC-HPE1	SD53CBW-HPE1	SD53C22-HPE1	SD53M22-HPE1
		Yes	SD53TC-HCPE1	SD53CBW-HCPE1	SD53C22-HCPE1	SD53M22-HCPE1

## COMPONENT MODEL NUMBERS

Back Box	Lower Dome	Dome Drive*
BB53HD-F In-ceiling, gray	LD53HDF-1 Clear, in-ceiling	DD53TC16 Color (NTSC) camera (128X)
BB53HD-PG Pendant, gray	LD53HDCF-1 Clear, in-ceiling with cage	DD53CBW Color/B-W (NTSC) camera (230X)
BB53HD-PG-E Environmental pendant, gray	LD53HDPB-1 Clear, pendant	DD53C22 Color (NTSC) camera (264X)
	LD53HDCPB-1 Clear, pendant with cage	DD53M22 Monochrome (EIA) camera (264X)
		DD5-FM** Removable, fixed mount bracket only (camera and lens not included).

\*For PAL and CCIR models add "-X" suffix to part number. (Example: SD53C22-HF1-**X** or SD53CBW-HCF1-**X**)

\*\*DD5-FM is ideal for use with Pelco's CCC1370H-2, CCC1370H-2X, and MCC1370H-2 cameras with selected Pelco lenses.

## ELECTRICAL

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	25 VA nominal (without heater) 70 VA nominal (with heater)
Fuse	1.25A
Auxiliary Outputs	2
Alarm Inputs	7

## GENERAL

Construction	
Back Box	Aluminum
Lower Dome	Clear polycarbonate, 0.090-inch thick
Cage	Thickness 0.12 x 0.30 cast stainless steel
Cage Color	Black, for maximum discreetness
Cable Entry (Back Box)	
In-ceiling	75-inch conduit fitting
Pendant	Through 1.5-inch NPT pendant mount
Weight (approximate)	
Back Box	
In-ceiling	2.17 lb (0.98 kg)
Pendant	4.45 lb (2.02 kg)
Environmental Pendant	4.75 lb (2.15 kg)
Lower Dome	
In-ceiling	1.6 lb (0.73 kg)
In-ceiling w/cage	3.6 lb (1.63 kg)
Pendant	1.83 lb (0.83 kg)
Pendant w/cage	3.83 lb (1.74 kg)
Environment	
In-ceiling	Indoor only
Pendant	Indoor/Outdoor
Environmental Pendant	Indoor/Outdoor
Dimensions	
Pendant	10.1" high x 9.7" diameter (25.65 cm x 24.64 cm)
In-ceiling	8.5" high x 9.75" diameter (21.59 cm x 24.77 cm)

## Operating Temperature

In-ceiling	32° to 122°F (0° to 50°C)
Pendant	32° to 140°F (0° to 60°C) absolute maximum operating temperature; 32° to 122°F (0° to 50°C) sustained maximum operating temperature.
Environmental Pendant	(Assumes no wind chill factor; for detailed test conditions, contact Pelco.)
Maximum	140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum.
Minimum	-60°F (-51°C) absolute minimum; Minimal icing at sustained minimum of -50°F (-45°C); Prevents icing at sustained minimum of -40°F (-40°C); de-ices 0.1 inch (2.5 mm) within 3 hours after power-up.

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- Meets NEMA Type 4X, IP66 standards (Pendant models)
- Meets NEMA Type 1, IP40 standards (In-ceiling models)
- U.S. Patents D-457,904 and D-460,978

## OPTIONAL ACCESSORIES

HD-KEYS	1 set of keys for heavy duty lower dome
IPS-CABLE	Remote monitor cable and software kit
IPS-RDPE-2	Remote data port
IPS-RMK	Remote monitor kit
TXB Series	Translator boards for AD Manchester, Philips (Burle), Sensormatic, and Vicon® protocols.
VC-UTP	Converts video for use with unshielded twisted pair (UTP)

## FIBER COMPATIBLE PRODUCTS

Fiber optic video transmitter/data receiver modules that plug directly into Spectra III Series back boxes are available through various manufacturers. Consult your fiber optics vendor for models and compatibility. Fiber optic modules cannot be used with TXB translator boards or VC-UTP.

Indicates change or addition.



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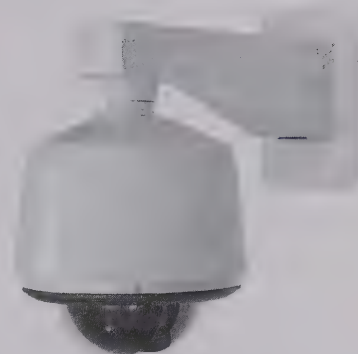
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## Stainless Steel Spectra III™ Series BACK BOX AND LOWER DOME

### Product Features

- All Stainless Steel Construction
- Built-in Back Box Memory
- 7 Alarm Inputs; 2 Programmable Auxiliary Outputs
- Built-in Surge and Limited Lightning Protection
- Compatible with All Spectra III SE and Spectra III Dome Drives
- Bubble Constructed of Optically Clear Acrylic
- Environmental Pendant Model Only
- Indoor/Outdoor Applications
- Meets NEMA Type 4X and IP66 Standards



**ENVIRONMENTAL PENDANT  
BB53-PSG-E AND LD53PSB-1  
(SHOWN WITH IDM4012SS WALL MOUNT)**

Pelco's **Stainless Steel Spectra III™** is designed for harsh environmental installations and meets NEMA Type 4X and IP66 standards.

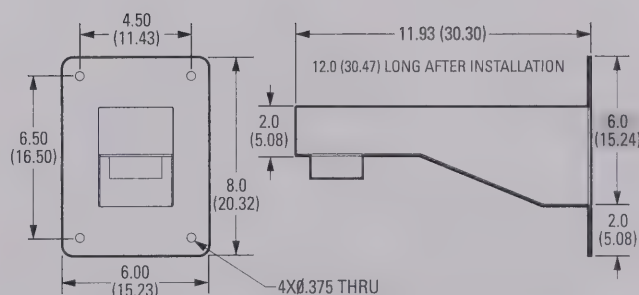
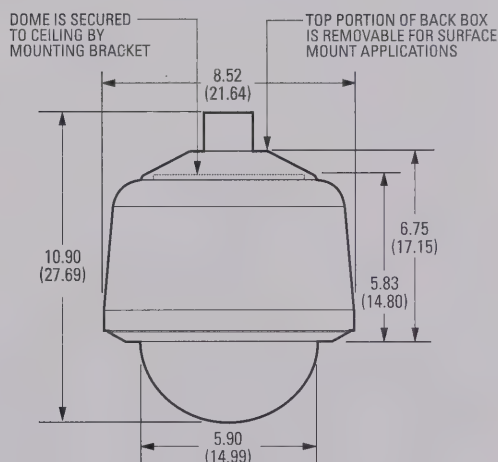
The components (back box and lower dome) provide added protection against corrosive conditions. The pendant-style back box (**BB53-PSG-E**) is constructed of Type 316 Stainless Steel (SS) and includes a sun shield (also constructed of Type 316 SS), heater and fan. The lower dome features a trim ring constructed of Type 316 SS and an optically clear bubble that is available in smoked (**LD53PSB-0**) or clear (**LD53PSB-1**) acrylic.

The **Stainless Steel Spectra III** has all the features of the Spectra III SE dome system (built-in back box memory, two auxiliary outputs, seven alarm inputs) and is also compatible with all Spectra III SE and Spectra III dome drives.

Camera and lens options for the **Stainless Steel Spectra III** include:

- Color/black-white camera, 80X wide dynamic range, motion detection, LowLight™ technology, and 23X optical zoom with 10X electronic zoom
- High-resolution color camera with an EXview HAD™ CCD, LowLight technology 22X optical zoom with 12X electronic zoom
- High-resolution monochrome camera with an EXview HAD CCD, LowLight technology and a 22X optical zoom with 12X electronic zoom
- High-resolution color camera with LowLight technology 16X optical zoom with 8X electronic zoom

For an alternative mounting option use the **IDM4012SS** wall mount. The **IDM4012SS** mount is designed specifically for the **Stainless Steel Spectra III Series** and features all stainless steel construction and conduit access in the bottom and back of the mount.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



**DataFAX**  
**SPEC:** 22437  
**MANUAL:** 224376

C2437 / REVISED 9-03

IP66



International Organization  
for Standardization  
Registered ISO 9001





## SYSTEM MODEL NUMBERS

Back Box Type	Lower Dome	SPECTRA III	SPECTRA III SE		
		16X Color*	23X Color/B-W*	22X Color*	22X Monochrome*
Environmental Pendant	Smoked	SD53TC-PSGE0	SD53CBW-PSGE0	SD53C22-PSGE0	SD53M22-PSGE0
	Clear	SD53TC-PSGE1	SD53CBW-PSGE1	SD53C22-PSGE1	SD53M22-PSGE1

## COMPONENT MODEL NUMBERS

Back Box		Lower Dome		Dome Drive*	
BB53-PSG-E Environmental Pendant mount, gray 316 SS		LD53PSB-0	Smoked, pendant, black trim ring 316 SS	DD53CBW	Color/B-W (NTSC) camera (230X)
		LD53PSB-1	Clear, pendant, black trim ring 316 SS	DD53C22	Color (NTSC) camera (264X)
				DD53M22	Monochrome (EIA) camera (264X)
				DD53TC16	Color (NTSC) camera (128X)
				DD5-FM**	Removable, fixed mount bracket only (camera and lens not included). Interchangeable with all Spectra III dome drives.

\*For PAL and CCIR models add "-X" suffix to part number. (Example: SD53C22-PSGE0**X** or DD53C22-**X**)

\*\*DD5-FM is ideal for use with Pelco's CCC1370H-2, CCC1370H-2X, and MCC1370H-2 cameras with selected Pelco lenses.

## ELECTRICAL

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	75 VA nominal
Fuse	1.6A
Auxiliary Outputs	2
Alarm Inputs	7

## GENERAL

Construction		
Back Box	316 Stainless steel; gray, polyurethane powder coated finish	
Lower Dome		
Trim Ring	316 Stainless steel; black, polyurethane powder coated finish	
Bubble	Acrylic, clear or smoked	
Cable Entry	Through 1.5-inch NPT back box pendant mount	
Weight (approximate)	Unit	Shipping
Back Box	4.75 lb (2.15 kg)	7 lb (3.18 kg)
Lower Dome	1.83 lb (0.83 kg)	4 lb (1.81 kg)
Dome Drive	2.4 lb (1.09 kg)	4 lb (1.81 kg)
Environment	Indoor/Outdoor	
Operating Temperature	(Assumes no wind chill factor; for detailed test conditions, contact Pelco.)	
Maximum	140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum.	
Minimum	-60°F (-51.11°C) absolute minimum; minimal icing at sustained minimum of -50°F (-45.56°C); prevents icing at sustained minimum of -40°F (-40°C); de-ices 0.1 inch (2.5 mm) within 3 hours after power-up.	

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- Meets NEMA Type 4X, IP66 standards when installed properly

## OPTIONAL ACCESSORIES

IPS-CABLE	Remote monitor cable and software. See <a href="http://www.pelco.com">www.pelco.com</a> for a list of compatible devices.
IPS-RDPE-2	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming and Spectra III OS software upgrades when used with the IPS-RMK or IPS-CABLE.
IPS-RMK	Remote monitor kit.
TXB Series	Translator boards for AD Manchester, Philips (Burle), Sensormatic, and Vicon® protocols.
VC-UTP	Converts video for use with unshielded twisted pair (UTP); maximum distance to passive receiver 500 feet (152 m). Plugs into TXB connector in Spectra back box. Coaxitron-ready when used with passive receiver. Works with all major suppliers of UTP modules. Not for use in conjunction with TXB boards.

## FIBER COMPATIBLE PRODUCTS

Fiber optic video transmitter/data receiver modules that plug directly into Spectra III SE and Spectra III back boxes are available through various manufacturers. Consult your fiber optics vendor for models and compatibility. Fiber optic modules cannot be used with TXB translator boards or VC-UTP.

## RECOMMENDED POWER SUPPLIES

WCS Series	Single/multiple 24 VAC camera power supply, outdoor
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## RECOMMENDED MOUNT

IDM4012SS	Stainless steel wall mount with feed-through capabilities
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Indicates change or addition.



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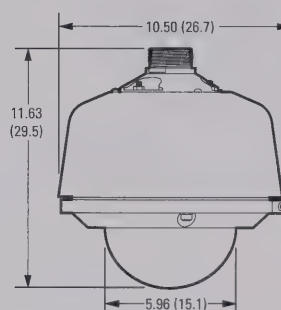
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## Pressurized Spectra III™ Series BACK BOX AND LOWER DOME

### Product Features

- Pressurized to 5 psig
- Solid-State Sensors for Internal Temperature, Pressure, and Dew Point
- On-Demand Environmental Status Display for Internal Temperature, Pressure, and Dew Point
- On-Screen Alert Modes
- On-Screen Programmable Menus for Pan/Tilt, Camera, and Sensor Alert Settings
- Built-in Back Box Memory
- 2 Auxiliary Outputs and 7 Alarm Inputs
- Environmental Pendant Style Back Box
- Stainless Steel Construction
- Meets NEMA Type 6P and IP67 Standards
- Compatible with All Spectra III™ SE and Spectra III™ Dome Drives
- Built-in Power Line Surge and Limited Lightning Protection
- Fiber Optic Feedthrough Models Available



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE IN INCHES.

Pelco's **Pressurized Spectra III™ Series** dome system provides ultimate protection of the camera optics and electronics from moisture, corrosive gases, and airborne contaminants. Domes are easily pressurized with dry nitrogen to 5 psig before or after installation to stabilize the environment inside the system.

Sensors strategically placed in the dome system send an "Alert" message when changes in internal pressure, temperature, or dew point are beyond factory-set acceptable limits. The sensors also allow for instant on-screen display of internal temperature, pressure, and dew point.

The components of the **Pressurized Spectra III Series** include an environmental pendant style back box and a lower dome designed for optimum optical clarity. All stainless steel construction provides added protection in harsh environments.

The back box features a sun shroud, heater, and fan to maintain a consistent operating environment. The back box also features built-in back box memory, two auxiliary outputs, seven alarm inputs and is compatible with all Spectra III SE and Spectra III Series dome drives.

The lower dome features an innovative O-ring seal and a stainless steel V-band to create a reliable pressure seal. The V-band has a unique latching system with one captivated fastener making lower dome installation easy. Accessible on the lower dome trim ring are a Schrader valve for system purging and a pressure relief valve.

The **Pressurized Spectra III Series** is supplied with a prewired cable with mating connector. The cable includes all wires for system functionality, including power, alarms, auxiliaries, coaxial video, UTP video, and serial control.

Also available are pressurized back box models with fiber optic feedthrough that allow third-party fiber optic modules to be installed inside the back box. These models include either a 9/125  $\mu\text{m}$  single-mode or 62.5/125  $\mu\text{m}$  multimode fiber optic cable with an ST-type connector.

Optional diagnostic/installation tools include a remote monitor kit (IPS-RMK) and a remote monitor cable (IPS-CABLE). These accessories allow the installer to view video, control PTZ functions, and perform system setup and software upgrades at the installation site.



DataFAX  
SPEC: 22478  
MANUAL: 224786

C2478 / NEW 10-03

IP67



International Organization  
for Standardization  
Registered ISO 9001





## SYSTEM MODEL NUMBERS

Back Box Type	Lower Dome	SPECTRA III	SPECTRA III SE		
		16X Color*	23X Color/B-W*	22X Color*	22X Monochrome*
Environmental Pendant, Pressurized	Smoked	SD53TC-PRE0	SD53CBW-PRE0	SD53C22-PRE0	SD53M22-PRE0
	Clear	SD53TC-PRE1	SD53CBW-PRE1	SD53C22-PRE1	SD53M22-PRE1
Environmental Pendant, Pressurized Fiber Optic Feedthrough, Single-Mode	Smoked	SD53TC-PRSE0	SD53CBW-PRSE0	SD53C22-PRSE0	SD53M22-PRSE0
	Clear	SD53TC-PRSE1	SD53CBW-PRSE1	SD53C22-PRSE1	SD53M22-PRSE1
Environmental Pendant, Pressurized Fiber Optic Feedthrough, Multimode	Smoked	SD53TC-PRME0	SD53CBW-PRME0	SD53C22-PRME0	SD53M22-PRME0
	Clear	SD53TC-PRME1	SD53CBW-PRME1	SD53C22-PRME1	SD53M22-PRME1

## COMPONENT MODEL NUMBERS

Back Box		Lower Dome		Dome Drive*	
BB53-PR-E	Environmental pendant, gray, pressurized	LD53PR-0	Lower dome with smoked bubble	DD53TC16	Color (NTSC) camera (128X)
BB53-PRS-E	Environmental pendant, gray, pressurized, fiber optic feedthrough, single-mode	LD53PR-1	Lower dome with clear bubble	DD53CBW	Color/B-W (NTSC) camera (230X)
BB53-PRM-E	Environmental pendant, gray, pressurized, fiber optic feedthrough, multimode			DD53C22	Color (NTSC) camera (264X)
				DD53M22	Monochrome (EIA) camera (264X)
				DD5-FM	Removable, fixed mount bracket only (camera and lens not included). Interchangeable with all Spectra III dome drives.

\*For PAL and CCIR models add "-X" suffix to part number. (Example: SD53C22-PRSE0-**X** or DD53C22-**X**)

**Note:** To order a fixed mount system, refer to the component models above and select a back box model, a lower dome model, and the DD5-FM dome drive. DD5-FM is ideal for use with Pelco's CCC1370H-2, CCC1370H-2X, and MCC1370H-2 cameras with selected Pelco lenses.

## ELECTRICAL

Input Voltage	18-30 VAC; 24 VAC nominal
Input Power	75 VA nominal (with heater)
Fuse	1.25 A
Auxiliary Outputs	2
Alarm Inputs	7

## GENERAL

Construction		
Back Box and Lower Dome	Type 316L stainless steel	
Bubble	Polycarbonate, 0.090-inch thick	
Light Attenuation	1 f-stop (Smoked); zero light loss (Clear)	
V-Band	Type 316L stainless steel	
Pressure Relief	Brass	
Schraeder Valve	Brass	
Connector	Nickel-plated steel	
Mounting	1.5-inch NPT, threaded	
Pressurization		
Valve	Schrader	
Pressure	5 psig (not factory pressurized)	
Pressure Relief	7 psig	
Operating Temperature	(Assumes no wind chill factor; for detailed test conditions, contact Pelco.)	
Maximum	140°F (60°C) absolute maximum; 122°F (50°C) sustained maximum.	
Minimum	-60°F (-51.11°C) absolute minimum; minimal icing at sustained minimum of -50°F (-45°C); prevents icing at sustained minimum of -40°F (-40°C); de-ices 0.1 inch (2.5 mm) within 3 hours after power-up.	
Weight (approximate)	Unit	Shipping
Back Box	10.2 lb (4.6 kg)	13 lb (5.9 kg)
Lower Dome	3.3 lb (1.5 kg)	7 lb (3.2 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- Meets NEMA Type 6P and IP67 standards

## OPTIONAL ACCESSORIES

IPS-RMK	Remote monitor kit
IPS-CABLE	Remote monitor cable and software kit
IPS-RDPE-2	Remote data port
EH8000RKIT	Dry nitrogen recharging kit (cannot be refilled)
TXB Series	Translator boards for AD Manchester, Bosch/Philips (Burle), Sensormatic, and Vicon® protocols.
VC-UTP	Converts video for use with unshielded twisted pair (UTP); cannot be used with TXB translator boards
Mounts	IDM4012SS (stainless steel, wall), IWM Series (wall), MRCA (ceiling), MRWA (wall), PP4348 (parapet roof), and PP350/PP351 (parapet wall/roof)

## FIBER COMPATIBLE PRODUCTS

Fiber optic video transmitter/data receiver modules that plug directly into Spectra III SE and Spectra III back boxes are available through various manufacturers. Consult your fiber optics vendor for models and compatibility. Fiber optic modules cannot be used with TXB translator boards or VC-UTP.



## Pelco Worldwide Headquarters:

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[www.pelco.com](http://www.pelco.com)

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Spectra III™ is a trademark of Pelco.

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## ES30C/ES31C Series Positioning System

### ESPRIT® SYSTEM WITH IOP CAMERA AND OPTIONAL WIPER

#### Product Features

- Receiver, Pan/Tilt, and Enclosure with an Integrated Optics Package (IOP)
- Auto Focus with Manual Override
- Programmable Camera Settings
- On-Screen Compass, Tilt, and Zoom Display
- Auto Iris with Manual Override
- Integral Multi-protocol Receiver/Driver
- Variable Speed Pan: 0.1° to 100°/second with Proportional Pan
- 360° Continuous Pan Rotation
- Zone Blanking – Allows up to eight zones (programmable in-size) to be set to output blank video
- Operational in 90 mph Wind Conditions; Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100° Per Second in 50 mph Winds and 50° Per Second in 90 mph Winds
- Tilt Range of +33° to -83° from Horizontal
- Preset Positioning, Patterns, Multiple Scan Modes
- Designed for Minimal Maintenance, No Gears to Adjust

The **ES30C** and **ES31C** are innovative additions to the successful product line of Esprit® Series Integrated Positioning Systems. The **ES30C** and **ES31C** not only combine a receiver, pan/tilt, and enclosure in a single, easy-to-install system, they also include an Integrated Optics Package (IOP). The Integrated Optics Package contains an auto-focus camera and lens module with programmable features.

For a wide range of applications, the **ES30C** and **ES31C** Series feature a choice of three different IOP cameras: a color camera (470 TVL) with a 160X zoom lens (16X optical, 10X electronic), a high-resolution camera with LowLight™ color technology and 220X zoom lens (22X optical, 10X electronic), and a high-resolution color/black-white camera with an infrared cut filter and 230X zoom lens (23X optical, 10X electronic).

A powder-coated, aluminum construction makes the **ES30C** and **ES31C** ideal for either indoor or outdoor applications. The system has an absolute operating temperature range of -50° to 140°F (-45° to 60°C). Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).

The **ES31C Series** includes a window wiper. The wiper is completely integrated into the enclosure and does not interfere with the viewing range of the system. The wiper can be programmed to delay between



ESPRIT IOP SYSTEM WITH WIPER  
(SHOWN WITH WALL MOUNT AND POLE ADAPTER)

wipes and to automatically shut off after a specified period. The wiper design also allows for easy replacement of the wiper blade. A built-in heater, window defroster/defogger, sun shroud, and insulation blanket are standard features on the **ES30C** and **ES31C** units. All units also include an open collector auxiliary output that functions for two seconds before deactivating.

The **ES30C** and **ES31C** Series variable pan and tilt speeds range from 0.1 to 40 degrees per second in manual pan mode and 0.1 to 20 degrees per second in manual tilt. Pan preset and turbo speeds are 100 degrees per second in wind speeds of 50 mph and 50 degrees per second in the 90-mph wind-speed profile. Tilt preset speed is 30 degrees per second. The **ES30C** and **ES31C** are capable of 360 degrees of continuous pan rotation. The tilt range allows for horizontal viewing of +33 to -83 degrees. There are 64 programmable preset positions with a preset accuracy of one-quarter degree.

The systems are available with an input voltage of 24 VAC or with a selectable power source of 120/230 VAC. The **ES30C** and **ES31C** also have a power-up recovery mode that allows the user to specify what operation the system will resume whenever the power is cycled.



DataFAX  
SPEC: 2307  
MANUAL: 23076

C307 / REVISED 10-03

IP66



U.S. Patents 340,940 and 5,224,675

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## PRODUCT FEATURES

- Deterrent Surveillance
- Integral Multi-Protocol (Coaxitron®, RS-422 D and P) Receiver/Driver
- Digital Position and Zoom Control and Feedback Via D Protocol
- Integral Camera Enclosure
- Variable Speed 0.1-100°/Second
- 360° Continuous Pan Rotation
- Quick and Easy Installation
- +33° to -83° Tilt Range
- Operational in 90 mph Winds, Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100° Per Second in 50 mph Winds and 50° Per Second in 90 mph Winds
- Meets NEMA Type 4X and IP66 Standards – Pan/Tilt and Enclosure
- Variable Scan Speeds (1-40°/Second)
- Translator Boards for Selected Competitive Protocols
- Easy to Install – Quick and Simple Electrical Connections
- 24 VAC or 120/230 VAC Selectable
- Designed for Minimal Maintenance, No Gears to Adjust
- Full Continuous-Duty Warranty

## SOFTWARE/HARDWARE

- 64 Programmable Presets with Labels
- Auto, Frame, and Random Scan
- Programmable Power-up Mode
- Programmable Park
- Programmable Manual Limit Stops (Pan)
- Programmable Scan Limit Stops (Pan)
- Patterns
- Proportional Pan/Tilt
- Eight Zones (programmable in size) Can Be Labeled with Up to 20 Characters Each
- Up to Eight Zones (programmable in size) Can Be Set to Output Blank Video
- 10-Inch Integrated Enclosure with Pre-Assembled, IOP Camera
- Sun Shroud, Heater/Window Defroster, and Insulation All Standard
- One Auxiliary Output
- Integrated Window Wiper with Programmable Delay and Shut-Off (ES31C Models)

## ALL CAMERAS

- Auto Focus with Manual Override
- Auto Iris with Manual Override
- Programmable Settings
- AC Line Lock
- NTSC/PAL

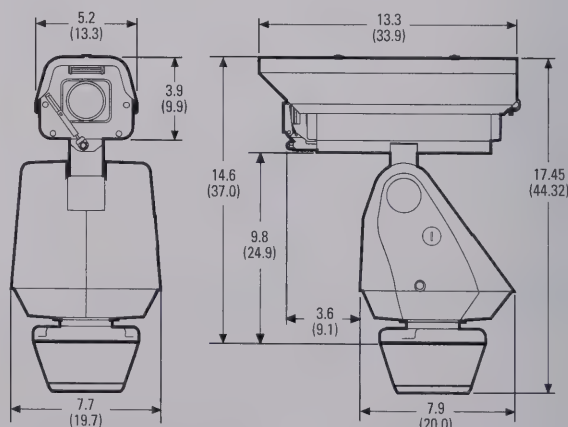
## ELECTRICAL

Input Voltage	24, 120, or 230 VAC, 50/60 Hz; switch selectable for 120/230 VAC inputs	
Input Voltage Range	±10%	
Power Consumption	Maximum 70 VA per system	
Heater and Defroster	Thermostatically controlled	
Electrical Connections	Two power source connections made at mount location with wire splices and one ground wire splice; one BNC receptacle and four wire splices at mount location for RS-422 D and P protocols; two wire splices for open collector auxiliary output	
Aux 2	Open collector output with 2-second activation; connected relay must require no more than 32 VDC and 40 mA to energize relay coil; wire length between Esprit and relay must be less than 100 feet (30 m)	
Video Coaxial Cable	Cable Type*	Maximum Distance
Max. Wiring Distances	RG59/U	750 feet (229 m)
	RG6/U	1,000 feet (305 m)
	RG11/U	1,500 feet (457 m)

\*Minimum cable requirements:  
75 ohms impedance; all-copper center conductor; all copper braided shield with 95% braid coverage

## MECHANICAL

Pan Movement	360° Continuous pan rotation
Vertical Tilt	Unobstructed +33° to -83°
Variable Pan/Tilt Speed	
Pan	0.1° to 40°/sec variable-speed operation, 100°/sec Turbo
Tilt	0.1° to 20°/sec variable-speed operation
Preset Speeds	
Pan	100°/sec
Tilt	30°/sec
Camera Mounting Latches	Integrated camera sled assembly One link-lock, No. 3 stainless-steel latch; can be secured with padlock (not supplied)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

## GENERAL

Construction	Die-cast, extruded and sheet aluminum; stainless steel hardware
Finish	Gray polyester powder coat
Viewing Window	0.23" (5.84 mm) thick, optically clear impact/ scratch-resistant coated Lexan®
Operating Temperature	-50° to 122°F (-45° to 50°C) for sustained system operation or 140°F (60°C) absolute maximum. Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).
Operating Environment	Will remain operational in 90 mph wind conditions; withstands 130 mph

Weight	With Pedestal Adapter	With Wall Mount
Unit		
Standard w/IOP	20 lb (9.0 kg)	22 lb (9.9 kg)
With Wiper and IOP	21 lb (9.5 kg)	23 lb (10.4 kg)
Shipping		
Standard w/IOP	25 lb (11.3 kg)	28 lb (12.6 kg)
With Wiper and IOP	26 lb (11.7 kg)	29 lb (13.1 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (all models)
- UL Listed (NTSC models)
- UL Listed to Canadian safety standards (NTSC models)
- FCC, Class B (NTSC models)
- Meets NEMA Type 4X and IP66 standards

## CAMERA/OPTICS

	Color/Black-White (23X)	Color, LowLight™ (22X)	Color, LowLight™ (16X)
Signal Format	NTSC, PAL	NTSC, PAL	NTSC, PAL
Scanning System	Progressive, 2:1 Interlace	2:1 Interlace	2:1 Interlace
Image Sensor	1/4-inch CCD	1/4-inch EXview HAD™ CCD	1/4-inch interline transfer CCD
Effective pixels			
NTSC	724 (H) x 494 (V)	768 (H) x 494 (V)	768 (H) x 494 (V)
PAL	724 (H) x 582 (V)	752 (H) x 582 (V)	752 (H) x 582 (V)
Horizontal Resolution			
NTSC	>470 TV lines	>470 TV lines	470 TV lines
PAL	>470 TV lines	>460 TV lines	460 TV lines
Lens	f/1.6 (f = 3.6–82.8 mm optical)	f/1.6 (f = 4–88 mm optical)	f/1.4 (f = 4–64 mm optical)
Zoom	23X optical, 10X electronic	22X optical, 10X electronic	16X optical, 10X electronic
Zoom Speed	4.2 seconds	3.9 seconds	3.6 seconds
Horizontal Angle of View	54° at 3.6 mm wide zoom; 2.5° at 82.8 mm telephoto zoom	47.3° at 4.0 mm wide zoom; 2.2° at 88 mm telephoto zoom	43° at 4.0 mm wide zoom; 3° at 64 mm telephoto zoom
Focus	Automatic with manual override	Automatic with manual override	Automatic with manual override
Maximum Sensitivity @35 IRE			
NTSC	0.08 lux at 1/2 sec shutter ( <b>color</b> ) 0.3 lux at 1/60 sec shutter ( <b>B-W</b> ) 0.013 lux at 1/2 sec shutter ( <b>B-W</b> )	0.02 lux at 1/2 sec shutter	0.05 lux at 1/2 sec shutter
PAL	0.08 lux at 1/1.5 sec shutter ( <b>color</b> ) 0.3 lux at 1/50 sec shutter ( <b>B-W</b> ) 0.013 lux at 1/1.5 sec shutter ( <b>B-W</b> )	0.02 lux at 1/1.5 sec shutter	0.05 lux at 1/1.5 sec shutter
Sync System	Internal/AC line lock, phase adjustable via remote control, V-Sync*	Internal/AC line lock, phase adjustable via remote control, V-Sync*	Internal/AC line lock, phase adjustable via remote control, V-Sync*
White Balance	Automatic with manual override*	Automatic with manual override*	Automatic with manual override*
Shutter Speed	Automatic (electronic iris)/Manual	Automatic (electronic iris)/Manual	Automatic (electronic iris)/Manual
NTSC	1/2–1/30,000*	1/2–1/30,000*	1/2–1/30,000*
PAL	1/1.5–1/30,000*	1/1.5–1/30,000*	1/1.5–1/30,000*
Iris Control	Automatic Iris Control with manual override*	Automatic Iris Control with manual override*	Automatic Iris Control with manual override*
Gain Control	Automatic/OFF*	Automatic/OFF*	Automatic with manual override*
Video Output	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms
Video Signal to Noise	>50 dB	>48 dB	>46 dB

\*Manual control of camera setup functions can be done with CM6700, CM6800, CM8500, CM9500, CM9740, CM9760, KBD200A, KBD300A, and MPT9500 controllers, but not with CM7500, MPT9000 or KBD9000 controllers.



## MODELS

Model		Format	Pedestal Mount		Wall Mount	
			24 VAC	120/230 VAC	24 VAC	120/230 VAC
<b>16X Color</b>	Standard	NTSC PAL	ES30C16-2N ES30C16-2N-X	ES30C16-5N ES30C16-5N-X	ES30C16-2W ES30C16-2W-X	ES30C16-5W ES30C16-5W-X
	With Wiper	NTSC PAL	ES31C16-2N ES31C16-2N-X	ES31C16-5N ES31C16-5N-X	ES31C16-2W ES31C16-2W-X	ES31C16-5W ES31C16-5W-X
<b>22X Color</b>	Standard	NTSC PAL	ES30C22-2N ES30C22-2N-X	ES30C22-5N ES30C22-5N-X	ES30C22-2W ES30C22-2W-X	ES30C22-5W ES30C22-5W-X
	With Wiper	NTSC PAL	ES31C22-2N ES31C22-2N-X	ES31C22-5N ES31C22-5N-X	ES31C22-2W ES31C22-2W-X	ES31C22-5W ES31C22-5W-X
<b>23X Color/ B-W</b>	Standard	NTSC PAL	ES30CBW18-2N ES30CBW18-2N-X	ES30CBW18-5N ES30CBW18-5N-X	ES30CBW18-2W ES30CBW18-2W-X	ES30CBW18-5W ES30CBW18-5W-X
	With Wiper	NTSC PAL	ES31CBW18-2N ES31CBW18-2N-X	ES31CBW18-5N ES31CBW18-5N-X	ES31CBW18-2W ES31CBW18-2W-X	ES31CBW18-5W ES31CBW18-5W-X

### REPLACEMENT INTEGRATED OPTICS PACKAGE (IOP CAMERA) MODULES

The following IOP modules are replacement components only; they are not interchangeable.

ESIOPC16	Esprit high resolution color camera and lens module, 16X, NTSC format
ESIOPC16-X	Same as ESIOPC16 except PAL format
ESIOPC22	Esprit high resolution color camera and lens module, 22X NTSC format
ESIOPC22-X	Same as ESIOPC22 except PAL format
ESIOPCBW18	Esprit high resolution color/B&W camera and lens module, 23X, NTSC format
ESIOPCBW18-X	Same as ESIOPCBW18 except PAL format

### OPTIONAL ACCESSORIES

ES-REPLBLADE-2	Package of two window wiper replacement blades
ES-REPLBLADE-10	Package of ten window wiper replacement blades

### RELATED PRODUCTS

IPS-RDPE-2	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming when used with the IPS-RMK. (No code upload.)
IPS-RMK	Remote monitor kit. Includes TFT-LCD monitor, PDA handheld, cables, and carrying case. Allows viewing of camera video, local PTZ control, and system setup.
TXB Series	Translator boards for AD Manchester, Philips (Burle), Sensormatic, and Vicon® protocols.

### RECOMMENDED MOUNTS

Esprit Series	Includes mounts for wall, pedestal, corner, parapet, and pole applications.
PM2000/PM2010	Pedestal mount with cable feedthrough. For use with Esprit systems with pedestal adapter plate.

### RECOMMENDED POWER SUPPLIES

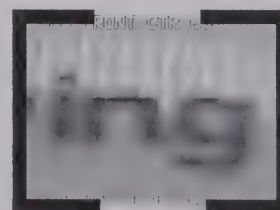
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor



WIDE ANGLE (4 mm)



22X (88 mm)



176X (8X DIGITAL)

Indicates change or addition.



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## ES30PC/ES31PC Series Positioning System

### ESPRIT® WITH PRESSURIZED IOC AND OPTIONAL WIPER

#### Product Features

- Receiver, Pan/Tilt, and Enclosure with Pressurized Integrated Optics Cartridge (IOC), NTSC/PAL
- All Components Factory Assembled and System Tested
- Pressurized Integrated Optics Cartridge Factory Charged to 10 psig
- Solid-State Sensors For Temperature, Pressure, and Dew Point
- On-Demand Environmental Status Display For Temperature, Pressure, and Dew Point
- On-Screen Multiple Fault Alert Modes
- On-Screen Compass, Tilt, and Zoom Display
- On-Screen Programmable Zone Blanking
- On-Screen Programmable Menus For Pan/Tilt, Camera, and Sensor Alert Settings
- All Standard Features of the Esprit Positioning System



Pelco's **ES30PC/ES31PC** Esprit Positioning System is optimally designed to protect camera optics and electronics from moisture and airborne contaminants. The system features a receiver, pan/tilt, enclosure, and a pressurized Integrated Optics Cartridge (IOC).

The **ES30PC/ES31PC** system's IOC packages an auto focus camera, lens, heater, and sensors in a small, self-contained, sealed unit. Dry nitrogen pressurized to 10 psig protects the environment inside the cartridge eliminating internal condensation and corrosion. Sensors strategically placed in the cartridge send an "Alert" message if changes in pressure, temperature and humidity are beyond factory set acceptable limits. The sensors also allow for instant on-screen display of temperature, pressure, and dew point.

The IOC is factory assembled and installed in the **ES30PC/ES31PC** systems. All labor intensive procedures of setting up the camera, lens and charging the unit with dry nitrogen are eliminated. The miniature size of the cartridge decreases the future need for maintenance and increases the overall reliability of the pressurized unit.

The **ES30PC** and **ES31PC** Series feature three models of pressurized Integrated Optics Cartridges. Models include a color camera (470 TVL) with a 160X zoom capability (16X optical, 10X electronic), a high-resolution camera with LowLight™ color technology and 220X zoom (22X optical, 10X electronic), and a high-resolution color/black-white camera with an infrared cut filter and 230X zoom (23X optical, 10X electronic.)

A powder-coated, aluminum construction makes the **ES30PC** and **ES31PC** ideal for either indoor or outdoor applications. The system has an absolute operating temperature range of -50° to 140°F (-45° to 50°C). Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).

The **ES31PC Series** has a window wiper completely integrated into the enclosure and designed not to interfere with the viewing range of the system. The wiper can be programmed to delay between wipes and to shut off automatically after a specified period. The wiper design also allows for easy replacement of the wiper blade.

The **ES30PC** and **ES31PC** Series variable pan and tilt speeds range from 0.1 to 40 degrees per second in manual pan mode and 0.1 to 20 degrees per second in manual tilt. Pan preset and turbo speeds are 100 degrees per second in wind speeds up to 50 mph and 50 degrees per second in the 90-mph wind-speed profile. Tilt preset speed is 30 degrees per second. The **ES30PC** and **ES31PC** are capable of 360 degrees of continuous pan rotation. The tilt range allows for horizontal viewing of +33 to -83 degrees. There are 64 programmable preset positions with a preset accuracy of one-quarter degree.

The systems are available with an input voltage of 24 VAC or with a selectable power source of 120/230 VAC. The **ES30PC** and **ES31PC** also have a power-up recovery mode that allows the user to specify what operation the system will resume whenever the power is cycled.



DataFAX  
SPEC: 2311  
MANUAL: Not Available through DataFAX

C311 / REVISED 10-03

IP66

IP67



U.S. Patent D-472,260

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## PRODUCT FEATURES

- Deterrent Surveillance
- Integral Multi-Protocol (Coaxitron®, RS-422 D and P) Receiver/Driver
- Digital Position and Zoom Control and Feedback Via D Protocol
- Integral Camera Enclosure
- Variable Speed 0.1-100°/Second
- 360° Continuous Pan Rotation
- Quick and Easy Installation
- +33° to -83° Tilt Range
- Operational in 90 mph Winds, Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100° Per Second in 50 mph Winds and 50° Per Second in 90 mph Winds
- Meets NEMA Type 4X and IP66 Standards – Pan/Tilt and Enclosure
- Meets IP67 Standards – Pressurized Integrated Optics Cartridge (IOC)
- Variable Scan Speeds (1-40°/Second)
- Translator Boards for Selected Competitive Protocols
- Easy to Install – Quick and Simple Electrical Connections
- 24 VAC or 120/230 VAC Selectable
- Designed for Minimal Maintenance, No Gears to Adjust
- Full Continuous-Duty Warranty

## SOFTWARE/HARDWARE

- 64 Programmable Presets with Labels
- Auto, Frame and Random Scan
- Programmable Power-up Mode
- Programmable Park
- Programmable Manual Limit Stops (Pan)
- Programmable Scan Limit Stops (Pan)
- Patterns
- Proportional Pan/Tilt
- Eight Zones (programmable in size) Can Be Labeled with Up to 20 Characters Each and Set to Output Blank Video
- 10-Inch Integrated Enclosure with Pre-Assembled, Pressurized IOC
- Sun Shroud, Heater/Window Defroster, and Insulation All Standard
- One Auxiliary Output
- Integrated Window Wiper with Programmable Delay and Shut-Off (ES31PC Models)

## PRESSURIZED INTEGRATED OPTICS CARTRIDGE (IOC)

- Pressurized to 10 psig, Nominal (Sea Level, 70°F)
- Internal Sensors for Temperature, Dew Point and Pressure
- On-Screen Alert for High and Low Temperature, High and Low Pressure, and High Humidity
- Four Alert On-Screen Display Modes
- Four Acknowledge Modes
- Pressurized Relief Valve
- Meets IP67 Standards

## All Cameras

- Auto Focus with Manual Override
- Auto Iris with Manual Override
- Programmable Settings
- AC Line Lock
- NTSC/PAL

## ELECTRICAL

## Input Voltage

24, 120, or 230 VAC, 50/60 Hz; switch selectable for 120/230 VAC inputs

## Input Voltage Range

±10%

## Power Consumption

Maximum 70 VA per system

## Heater/Defroster

Digital temperature control

## Electrical Connections

Two power source connections made at mount location with wire splices and one ground wire splice; one BNC receptacle and four wire splices at mount location for RS-422 D and P protocols; two wire splices for open collector auxiliary output

## Aux 2

Open collector output with 2-second activation; connected relay must require no more than 32 VDC and 40 mA to energize relay coil; wire length between Esprit and relay must be less than 100 ft (30 m)

## Video Coaxial Cable

## Max. Wiring Distances

Cable Type*	Maximum Distance
RG59/U	750 feet (229 m)
RG6/U	1,000 feet (305 m)
RG11/U	1,500 feet (457 m)

\*Minimum cable requirements:

75 ohms impedance; all-copper center conductor; all copper braided shield with 95% braid coverage

## MECHANICAL

## Pan Movement

360° Continuous pan rotation

## Vertical Tilt

Unobstructed +33° to -83°

## Variable Pan/Tilt Speed

## Pan

0.1° to 40°/sec variable-speed operation, 100°/sec Turbo

## Tilt

0.1° to 20°/sec variable-speed operation

## Preset Speeds

## Pan

100°/sec

## Tilt

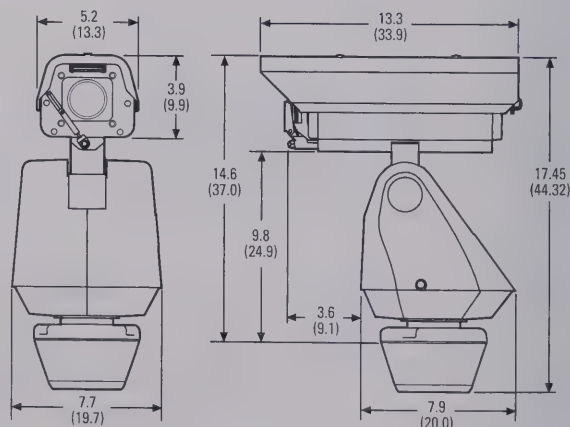
30°/sec

## Camera Mounting

Replaceable pressurized cartridge

## Latches

One link-lock, No. 3 stainless-steel latch; can be secured with padlock (not supplied)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## GENERAL

Construction	Die-cast, extruded and sheet aluminum; stainless steel hardware
Finish	Gray polyester powder coat
Viewing Window	0.23" (5.84 mm) thick, optically clear tempered glass
Operating Temperature	-50° to 122°F (-45° to 50°C) for sustained system operation or 140°F (60°C) absolute maximum. Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).
Operating Environment	Will remain operational in 90 mph wind conditions; withstands 130 mph

Weight	With Pedestal Adapter	With Wall Mount
Unit		
Standard w/IOC	21 lb (9.5 kg)	23 lb (10.4 kg)
With Wiper and IOC	22 lb (10 kg)	24 lb (11 kg)
Shipping		
Standard w/IOC	26 lb (11.7 kg)	29 lb (13.1 kg)
With Wiper and IOC	27 lb (12.3 kg)	30 lb (13.6 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
  - UL Listed
  - UL Listed to Canadian safety standards
  - FCC, Class B (NTSC models)
  - U.S. Patent D-472,260
- Meets the following standards:
- NEMA Type 4X (Pan/Tilt and Enclosure)
  - IP66 (Pan/Tilt and Enclosure)
  - IP67 (Pressurized Integrated Optics Cartridge [IOC])

## CAMERA/OPTICS

	Color/Black-White (23X)	Color, LowLight™ (22X)	Color, LowLight™ (16X)
Signal Format	NTSC, PAL	NTSC, PAL	NTSC, PAL
Scanning System	Progressive, 2:1 Interlace	2:1 Interlace	2:1 Interlace
Image Sensor	1/4-inch CCD	1/4-inch EXview HAD™ CCD	1/4-inch interline transfer CCD
Effective pixels			
NTSC	724 (H) x 494 (V)	768 (H) x 494 (V)	768 (H) x 494 (V)
PAL	724 (H) x 582 (V)	752 (H) x 582 (V)	752 (H) x 582 (V)
Horizontal Resolution			
NTSC	>470 TV lines	>470 TV lines	470 TV lines
PAL	>470 TV lines	>460 TV lines	460 TV lines
Lens	f/1.6 (f = 3.6–82.8 mm optical)	f/1.6 (f = 4–88 mm optical)	f/1.4 (f = 4–64 mm optical)
Zoom	23X optical, 10X electronic	22X optical, 10X electronic	16X optical, 10X electronic
Zoom Speed	4.2 seconds	3.9 seconds	3.6 seconds
Horizontal Angle of View	54° at 3.6 mm wide zoom; 2.5° at 82.8 mm telephoto zoom	47.3° at 4.0 mm wide zoom; 2.2° at 88 mm telephoto zoom	43° at 4.0 mm wide zoom; 3° at 64 mm telephoto zoom
Focus	Automatic with manual override	Automatic with manual override	Automatic with manual override
Maximum Sensitivity @35 IRE			
NTSC	0.08 lux at 1/2 sec shutter (color) 0.3 lux at 1/60 sec shutter (B-W) 0.013 lux at 1/2 sec shutter (B-W)	0.02 lux at 1/2 sec shutter	0.05 lux at 1/2 sec shutter
PAL	0.08 lux at 1/1.5 sec shutter (color) 0.3 lux at 1/50 sec shutter (B-W) 0.013 lux at 1/1.5 sec shutter (B-W)	0.02 lux at 1/1.5 sec shutter	0.05 lux at 1/1.5 sec shutter
Sync System	Internal/AC line lock, phase adjustable via remote control, V-Sync*	Internal/AC line lock, phase adjustable via remote control, V-Sync*	Internal/AC line lock, phase adjustable via remote control, V-Sync*
White Balance	Automatic with manual override*	Automatic with manual override*	Automatic with manual override*
Shutter Speed			
NTSC	Automatic (electronic iris)/Manual 1/2–1/30,000*	Automatic (electronic iris)/Manual 1/2–1/30,000*	Automatic (electronic iris)/Manual 1/2–1/30,000*
PAL	1/1.5–1/30,000*	1/1.5–1/30,000*	1/1.5–1/30,000*
Iris Control	Automatic Iris Control with manual override*	Automatic Iris Control with manual override*	Automatic Iris Control with manual override*
Gain Control	Automatic/OFF*	Automatic/OFF*	Automatic with manual override*
Video Output	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms
Video Signal to Noise	>50 dB	>48 dB	>46 dB

\*Manual control of camera setup functions can be done with CM6700, CM6800, CM8500, CM9500, CM9740, CM9760, KBD200A, KBD300A, and MPT9500 controllers, but not with CM7500, MPT9000 or KBD9000 controllers.



## MODELS

Model	Format	Pedestal Mount		Wall Mount	
		24 VAC	120/230 VAC	24 VAC	120/230 VAC
<b>16X Color</b>	Standard	NTSC PAL	ES30PC16-2N ES30PC16-2N-X	ES30PC16-2W ES30PC16-2W-X	ES30PC16-5W ES30PC16-5W-X
	With Wiper	NTSC PAL	ES31PC16-2N ES31PC16-2N-X	ES31PC16-2W ES31PC16-2W-X	ES31PC16-5W ES31PC16-5W-X
<b>22X Color</b>	Standard	NTSC PAL	ES30PC22-2N ES30PC22-2N-X	ES30PC22-2W ES30PC22-2W-X	ES30PC22-5W ES30PC22-5W-X
	With Wiper	NTSC PAL	ES31PC22-2N ES31PC22-2N-X	ES31PC22-2W ES31PC22-2W-X	ES31PC22-5W ES31PC22-5W-X
<b>23X Color/ B-W</b>	Standard	NTSC PAL	ES30PCBW18-2N ES30PCBW18-2N-X	ES30PCBW18-2W ES30PCBW18-2W-X	ES30PCBW18-5W ES30PCBW18-5W-X
	With Wiper	NTSC PAL	ES31PCBW18-2N ES31PCBW18-2N-X	ES31PCBW18-2W ES31PCBW18-2W-X	ES31PCBW18-5W ES31PCBW18-5W-X

REPLACEMENT PRESSURIZED INTEGRATED OPTICS  
CARTRIDGE (IOC)

The following IOC models are replacement components only; they are not interchangeable.

IOC-C16	Esprit high resolution color camera and lens module, 16X, NTSC format
IOC-C16-X	Same as IOC-C16 except PAL format
IOC-C22	Esprit high resolution color camera and lens module, 22X, NTSC format
IOC-C22-X	Same as IOC-C22 except PAL format
IOC-CBW18	Esprit high resolution color/B-W camera and lens module, 23X, NTSC format
IOC-CBW18-X	Same as IOC-CBW18 except PAL format

## OPTIONAL ACCESSORIES

ES-REPLBLADE-2	Package of two window wiper replacement blades
ES-REPLBLADE-10	Package of ten window wiper replacement blades

## RELATED PRODUCTS

IPS-RDPE-2	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming when used with the IPS-RMK. (No code upload.)
IPS-RMK	Remote monitor kit. Includes TFT-LCD monitor, PDA handheld, cables, and carrying case. Allows viewing of camera video, local PTZ control, and system setup.
TXB Series	Translator boards for AD Manchester, Philips (Burle), Sensormatic, and Vicon® protocols.

## RECOMMENDED MOUNTS

Esprit Series	Includes mounts for wall, pedestal, corner, parapet, and pole applications.
PM2000/ PM2010	Pedestal mount with cable feedthrough. For use with Esprit systems with pedestal adapter plate.

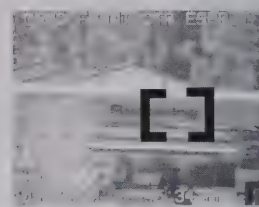
## RECOMMENDED POWER SUPPLIES

MCS Series  
WCS Series

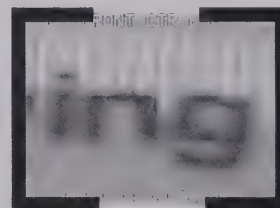
Multiple 24 VAC camera power supply, indoor  
Single/multiple 24 VAC camera power supply, outdoor



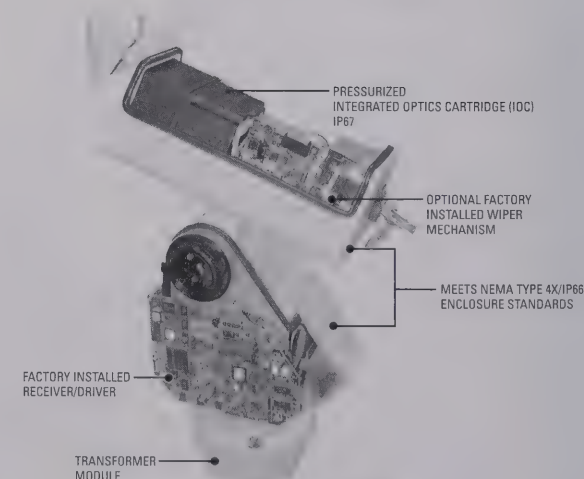
WIDE ANGLE (4 mm)



22X (88 mm)



176X (8X DIGITAL)



Indicates change or addition.



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EXview HAD™ is a trademark of the Sony Corporation.

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## ES3012 Series Integrated Positioning System

ESPRIT® PREMIUM PERFORMANCE P/T, COAXITRON® COMPATIBLE

### Product Features

- Integrated Receiver, Pan/Tilt, and Housing with No Exposed Cabling
- Optional ImagePak® Integrated Optics Package
- Quick and Simple Electrical Connections
- Variable Speed – Advanced Motor Control Technology
- 360° Continuous Pan Rotation
- Zone Blanking – Allows up to eight zones (programmable in size) to be set to output blank video.
- Operational in 90 mph Wind Conditions; Can Withstand Wind Velocity Up to 130 mph
- Pan Preset Speed of 100° Per Second in 50 mph Winds and 50° Per Second in 90 mph Winds
- Tilt Range of +33° to -83° from Horizontal
- Preset Positioning
- Designed for Minimal Maintenance, No Gears to Adjust
- Lightweight Aluminum Construction
- Meets NEMA Type 4X and IP66 Standards



ES3012-2W SYSTEM  
WITH WALL MOUNT

Pelco's **Esprit® ES3012 Series** integrated positioning system ingeniously integrates a pan/tilt, enclosure, and receiver into one compact system that is easy to install. On-screen, user-friendly menus also make the system easy to program and operate.

The **ES3012 Series** is available as a standard or ImagePak® system. The **Esprit ImagePak** system combines the innovative design of the standard system with a factory-installed camera and lens package of your choice. Choose from a variety of standard or high-resolution, color or monochrome camera and lens combinations. The standard system does not include the camera and lens components. It is designed to accept any 24 VAC camera and lens combination up to 3.45" W x 3.17" H x 12.10" L (8.76 x 8.05 x 30.73 cm).

Every **ES3012** system (standard or ImagePak) has a built-in heater, window defroster/defogger, sun shroud, and insulation blanket. The system is available with an input voltage of 24 VAC or with a selectable power source of 120/230 VAC.

A powder-coated, aluminum construction makes the ES3012 ideal for either indoor or outdoor applications. The system has an absolute operating temperature range of -40° to 140°F (-40° to 60°C). Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).

The **Esprit ES3012 Series** variable pan and tilt speeds range from 0.5 degrees to 40 degrees per second in manual pan mode and 0.5 degrees to 20 degrees per second in manual tilt. Pan preset and turbo speeds are 100 degrees per second in wind speeds of 50 mph and 50 degrees per second in the 90 mph wind-speed profile. Tilt preset speed is 30 degrees per second. The **ES3012** is capable of 360 degrees of continuous pan rotation. The tilt range allows for horizontal viewing of +33 to -83 degrees. There are 64 programmable preset positions with a preset accuracy of one-quarter degree.

The **ES3012** features on-screen programmable menus for pan and scan speed, limit stops, zone blanking, and patterns. The unit also has a power-up recovery mode that allows the user to specify what condition the system will resume whenever the power is cycled.



DataFAX  
SPEC: 2306

MANUAL: Not Available through DataFAX

C306 / REVISED 12-03

IP66



U.S. Patents 340,940 and 5,224,675

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## ELECTRICAL

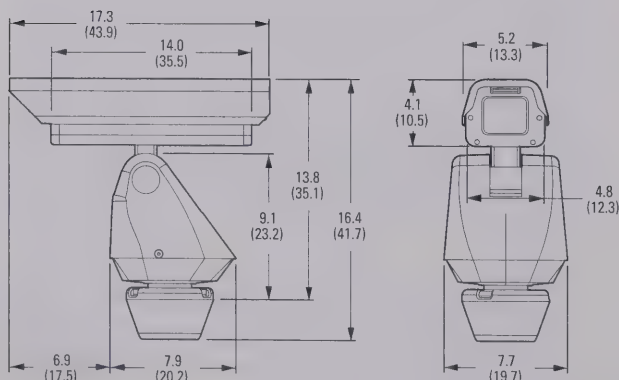
Input Voltage	24, 120, or 230 VAC, 50/60 Hz; switch selectable for 120/230 VAC inputs								
Input Voltage Range	±10%								
Power Consumption	Maximum 50 VA per system								
Camera and Lens Voltage	24 VAC								
Heater and Defroster	Thermostatically controlled								
Electrical Connections	Two power source connections made at mount location with wire nut splices and one ground terminal; one BNC receptacle and four terminals on interconnect PCB at mount location								
Video Coaxial Cable									
Max. Wiring Distances	<table> <tr> <th>Cable Type*</th><th>Maximum Distance</th></tr> <tr> <td>RG59/U</td><td>750 feet (229 m)</td></tr> <tr> <td>RG6/U</td><td>1,000 feet (305 m)</td></tr> <tr> <td>RG11/U</td><td>1,500 feet (457 m)</td></tr> </table>	Cable Type*	Maximum Distance	RG59/U	750 feet (229 m)	RG6/U	1,000 feet (305 m)	RG11/U	1,500 feet (457 m)
Cable Type*	Maximum Distance								
RG59/U	750 feet (229 m)								
RG6/U	1,000 feet (305 m)								
RG11/U	1,500 feet (457 m)								

\*Minimum cable requirements:

75 ohms impedance; all-copper center conductor; all copper braided shield with 95% braid coverage

## MECHANICAL

Pan Movement	360° Continuous pan rotation
Vertical Tilt	Unobstructed +33° to -83°
Variable Pan/Tilt Speed	
Pan	0.5° to 40°/sec variable-speed operation, 100°/sec Turbo
Tilt	0.5° to 20°/sec variable-speed operation
Preset Speeds	
Pan	100°/sec
Tilt	30°/sec
Camera Mounting	Elongated holes on removable camera mount; supplied with an adapter bracket to accommodate various heights of cameras
Maximum Camera and Lens Size	Accepts camera and lens combinations (including BNC connector) up to: 3.45" W x 3.17" H x 12.10" L (8.76 x 8.05 x 30.73 cm)
Latches	One link-lock, No. 3 stainless-steel latch; can be secured with padlock (not supplied)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## GENERAL

Construction	Die-cast, extruded and sheet aluminum; stainless steel hardware
Finish	Gray polyester powder coat
Viewing Window	0.18" (4.76 mm) thick, optically clear, impact-resistant MR5 coated Lexan® (U.L. 94HB rated)
Window Viewing Area	2.25-inch (5.71 cm) diameter
Operating Temperature	-40° to 122°F (-40° to 50°C) for sustained system operation or 140°F (60°C) absolute maximum. Within two hours after power-up, the entire unit can de-ice and be operational from a temperature of -13°F (-25°C).
Operating Environment	Will remain operational in 90 mph wind conditions; withstands 130 mph
Unit Weight	
ES3012-2, ES3012-5	20 lb (9.1 kg)
ES3012-2 or ES3012-5 with ImagePak option	25.7 lb (11.7 kg)
Shipping Weight	
ES3012-2, ES3012-5	27 lb (12.3 kg)
ES3012-2 or ES3012-5 with ImagePak option	33 lb (14.8 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- Meets NEMA Type 4X and IP66 standards
- U.S. Patent 340,940 and 5,224,675

LENS SPECIFICATIONS  
(IMAGEPAK® ESPRIT SYSTEMS ONLY)

	Z10/Z10P	Z18/Z18P
Type	Motorized zoom	Motorized zoom
Format Size	1/3-inch	1/2-inch
Focal Length	6-60 mm	11-200 mm
Zoom Ratio	10X	18X
Relative Aperture (F)	1.6-360	1.8-360
Operation		
Iris	Auto iris (direct drive)	Auto iris (video drive)
Focus and Zoom	Motorized*	Motorized*
Angle of View		
Diagonal	9.7°-53.7°	2.3°-39.7°
Horizontal	7.8°-43.7°	1.9°-32.1°
Vertical	5.9°-33.0°	1.4°-24.3°
Min. Object Distance	1.0m	1.5m
	Z20/Z20P	Z30/Z30P
Type	Motorized zoom	Motorized zoom
Format Size	1/3-inch	1/3-inch
Focal Length	5.6-112 mm	5.5-165 mm
Zoom Ratio	20X	30X
Relative Aperture (F)	1.6-360	1.8-360
Operation		
Iris	Auto iris (direct drive)	Auto iris (direct drive)
Focus and Zoom	Motorized*	Motorized*
Angle of View		
Diagonal	3.2°-59.4°	2.1°-58.7°
Horizontal	2.6°-47.6°	1.7°-47.6°
Vertical	1.9°-35.7°	1.3°-33.9°
Min. Object Distance	1.5m	1.8m

\*Model numbers with "P" suffix are motorized with preset capability.

## CAMERA SPECIFICATIONS (IMAGEPAK® ESPRIT SYSTEMS ONLY)

	COLOR		MONOCHROME	
	High Resolution, LowLight™ DSS		High Resolution, EXview LowLight™	
	CC3751H-2 (ImagePak Model CL)	CC3651H-2X (ImagePak Model CM)	MC3651H-2 (ImagePak Model ML)	MC3651H-2X (ImagePak Model MM)
Signal Format	NTSC	PAL	EIA	CCIR
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch Ex-View HAD™ CCD	1/3-inch Ex-View HAD™ CCD
Picture Elements	768 (H) x 494 (V)	795 (H) x 696 (V)	768 (H) x 494 (V)	795 (H) x 596 (V)
Scanning System	525 lines; 2:1 interlace	625 lines; 2:1 interlace	525 lines; 2:1 interlace	625 lines; 2:1 interlace
Horizontal Resolution	480 TVL	480 TVL	570 TVL	570 TVL
Minimum Illumination	0.01 lux at 40 IRE, f1.2	0.01 lux at 40 IRE, f1.2	0.07 lux at 40 IRE, f1.2*	0.07 lux at 40 IRE, f1.2*
CCD Iris	1/60 to 1/100,000 sec	1/60 to 1/100,000 sec	1/60 to 1/100,000 sec	1/60 to 1/100,000 sec
Signal-to-Noise Ratio	50 dB	50 dB	50 dB	50 dB
Automatic Gain Control	Automatic	Automatic	On/off selectable	On/off selectable
Backlight Compensation	On/off selectable	On/off selectable	On/off selectable	On/off selectable
*With integration 1/2 second				
	High Resolution, Extended Dynamic Range		High Resolution, EXview	
	CC3701H-2 (ImagePak Model CB)	CC3701H-2X (ImagePak Model CD)	MC3610H-6 (ImagePak Model MH)	MC3610H-6X (ImagePak Model ME)
	CC3701H-2 (ImagePak Model CB)	CC3701H-2X (ImagePak Model CD)	MC3610H-6 (ImagePak Model MH)	MC3610H-6X (ImagePak Model ME)
Signal Format	NTSC	PAL	EIA	CCIR
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch Ex-View HAD™ CCD	1/3-inch Ex-View HAD™ CCD
Picture Elements	768 (H) x 494 (V)	752 (H) x 582 (V)	768 (H) x 494 (V)	752 (H) x 582 (V)
Scanning System	525 lines; 2:1 interlace	625 lines; 2:1 interlace	525 lines; 2:1 interlace	625 lines; 2:1 interlace
Horizontal Resolution	480 TVL	480 TVL	570 TVL	570 TVL
Minimum Illumination	0.5 lux at 40 IRE, f1.2	0.5 lux at 40 IRE, f1.2	0.04 lux at 40 IRE, f1.2	0.04 lux at 40 IRE, f1.2
CCD Iris	1/60 to 1/100,000 sec	1/60 to 1/100,000 sec	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec
Signal-to-Noise Ratio	52 dB	52 dB	>50 dB	>50 dB
Automatic Gain Control	On/off selectable	On/off selectable	On/off selectable	On/off selectable
Backlight Compensation	On/off selectable	On/off selectable	On/off selectable	On/off selectable
	High Resolution, Day/Night		High Resolution	
	CC3770H-6 (ImagePak Model DA)	CC3770H-6X (ImagePak Model DB)	MC3710H-6 (ImagePak Model MF)	MC3710H-6X (ImagePak Model MK)
	CC3770H-6 (ImagePak Model DA)	CC3770H-6X (ImagePak Model DB)	MC3710H-6 (ImagePak Model MF)	MC3710H-6X (ImagePak Model MK)
Signal Format	NTSC	PAL	EIA	CCIR
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD
Picture Elements	768 (H) x 494 (V)	752 (H) x 582 (V)	768 (H) x 494 (V)	752 (H) x 582 (V)
Scanning System	525 lines; 2:1 interlace	625 lines; 2:1 interlace	525 lines; 2:1 interlace	625 lines; 2:1 interlace
Horizontal Resolution	480 TVL	480 TVL	570 TVL	570 TVL
Minimum Illumination	0.7 lux at 40 IRE, f1.2 (color) 0.09 lux at 40 IRE, f1.2 (B-W)	0.7 lux at 40 IRE, f1.2 (color) 0.09 lux at 40 IRE, f1.2 (B-W)	0.07 lux at 40 IRE, f1.2	0.07 lux at 40 IRE, f1.2
CCD Iris	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec
Signal-to-Noise Ratio	>50 dB	>50 dB	>50 dB	>50 dB
Automatic Gain Control	On/off selectable	On/off selectable	On/off selectable	On/off selectable
Backlight Compensation	On/off selectable	On/off selectable	On/off selectable	On/off selectable
	High Resolution		Standard Resolution	
	CC3710H-6 (ImagePak Model CH)	CC3710H-6X (ImagePak Model CK)	MC3710S-6 (ImagePak Model MG)	MC3710S-6X (ImagePak Model MJ)
	CC3710H-6 (ImagePak Model CH)	CC3710H-6X (ImagePak Model CK)	MC3710S-6 (ImagePak Model MG)	MC3710S-6X (ImagePak Model MJ)
Signal Format	NTSC	PAL	EIA	CCIR
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD
Picture Elements	768 (H) x 494 (V)	752 (H) x 582 (V)	510 (H) x 492 (V)	500 (H) x 582 (V)
Scanning System	525 lines; 2:1 interlace	625 lines; 2:1 interlace	525 lines; 2:1 interlace	625 lines; 2:1 interlace
Horizontal Resolution	480 TVL	480 TVL	380 TVL	380 TVL
Minimum Illumination	0.7 lux at 40 IRE, f1.2	0.7 lux at 40 IRE, f1.2	0.06 lux at 40 IRE, f1.2	0.06 lux at 40 IRE, f1.2
CCD Iris	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec	1/60 to 1/100,000 sec	1/50 to 1/100,000 sec
Signal-to-Noise Ratio	>50 dB	>50 dB	>50 dB	>50 dB
Automatic Gain Control	On/off selectable	On/off selectable	On/off selectable	On/off selectable
Backlight Compensation	On/off selectable	On/off selectable	On/off selectable	On/off selectable



**MODELS****Basic**

ES3012-2	Standard Esprit integrated positioning system (pan/tilt, enclosure and receiver), 24 VAC, no mount.
ES3012-5	Same as ES3012-2 except 120/230 VAC.
ES3012-2N	Standard Esprit integrated positioning system, 24 VAC, with pedestal adapter plate.
ES3012-5N	Same as ES3012-2N except 120/230 VAC.
ES3012-2W	Standard Esprit integrated positioning system, 24 VAC, with wall mount.
ES3012-5W	Same as ES3012-2W except 120/230 VAC.

**RECOMMENDED MOUNTS**

Esprit Series	Includes mounts for wall, pedestal, corner, parapet, and pole applications.
PM2000/PM2010	Pedestal mount with cable feedthrough. For use with Esprit systems with pedestal adapter plate.

**RELATED PRODUCTS**

IPS-RDPE-2	Remote data port. 24 VAC, wall/pole mount video/data breakout box. Allows ground-level control/programming when used with the IPS-RMK. (No code upload.)
IPS-RMK	Remote monitor kit. Includes TFT-LCD monitor, PDA handheld, cables, and carrying case. Allows viewing of camera video, local PTZ control, and system setup.
TXB Series	Translator boards for model specific AD Manchester, Philips (Burle), Sensormatic, and Vicon® protocols.

**RECOMMENDED POWER SUPPLIES**

MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

**RECOMMENDED CONTROLS**

All Pelco multiplexer and matrix switchers:  
CM6700, CM6800, CM9740, CM9760, CM9770, MPT9500, MPT9000,  
MX4000 Series, and PelcoNet™ Series.

**RECOMMENDED KEYBOARD CONTROLS**

(For use in Direct Mode operation only)

KBD200A*	Desktop keyboard, multispeed PTZ control
KBD300A*	Desktop keyboard, variable speed PTZ control
MPT9500	Microprocessor-based transmitter/controller

\*KBD keyboards require a remote keyboard wiring kit (KBDKIT) for direct mode operation; allows two-wire control of up to 16 daisy-chained receivers (or Esprit systems). Keyboards output Pelco P protocol at 4800 baud.

**ImagePak® Esprit Systems**

Create a complete, ready-to-install system (including optics package) from the optional components below or refer to the Esprit ImagePak Selection Guide for model numbers.

**ES3012-5CHZ20PW****Esprit® Series**

ES3012

**Primary Input Voltage**

-2 = 24 VAC  
-5 = 120/230 VAC

**Camera Configuration****Color**

CL = CC3751H-2 High Res, LowLight (NTSC)  
CM = CC3651H-2X High Res, LowLight (PAL)  
CB = CC3701H-2 High Res, EDR (NTSC)  
CD = CC3701H-2X High Res, EDR (PAL)  
DA = CC3770H-6 High Res, Day/Night (NTSC)  
DB = CC3770H-6X High Res, Day/Night (PAL)  
CH = CC3710H-6 High Res (NTSC)  
CK = CC3710H-6X High Res (PAL)

**Monochrome**

ML = MC3651H-2 High Res, EXview LowLight (EIA)  
MM = MC3651H-2X High Res, EXview LowLight (CCIR)  
MH = MC3610H-6 High Res, EXview (EIA)  
ME = MC3610H-6X High Res, EXview (CCIR)  
MF = MC3710H-6 High Res (EIA)  
MK = MC3710H-6X High Res (CCIR)  
MG = MC3710S-6 Standard Res (EIA)  
MJ = MC3710S-6X Standard Res (CCIR)

**Lens Configuration**

Z10 = 13ZD6X10 10X, 6-60 mm  
Z10P = 13ZD6X10P 10X, 6-60 mm, with presets  
Z18\* = 12ZV11X18 18X, 11-200 mm  
Z18P\* = 12ZV11X18P 18X, 11-200 mm, with presets  
Z20 = 13ZD5.6X20 20X, 5.6-112 mm  
Z20P = 13ZD5.6X20P 20X, 5.6-112 mm, with presets  
Z30\* = 13ZD5.5X30 30X, 5.5-165 mm  
Z30P\* = 13ZD5.5X30P 30X, 5.5-165 mm, with presets

**Mount Configuration**

N = EPP pedestal adapter  
W = EWM wall mount

\*18X and 30X lenses compatible only with CB, CD, CL, CM, ML, and MM camera types.

Indicates change or addition.

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Vicon® is a registered trademark of the Vicon Industries, Inc.  
EXview HAD™ is a trademark of the Sony Corporation.  
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## DF5 Series DomePak®

### COMPLETE, FIXED MOUNT DOME, CAMERA AND LENS PACKAGE

#### Product Features

- Pre-Packaged Dome, Camera, and Lens
- Easy to Order
- Cosmetically Matches Spectra® Dome
- Indoor and Environmental Models Available
- Hard Ceiling, Suspended Ceiling, and Pendant Applications
- Versatile and Adjustable Fixed Mount Camera Bracket
- High Resolution Color and Monochrome Cameras
- Varifocal and Fixed Lens Options
- Pendant Models Meet NEMA Type 4X and IP66 Standards
- Heavy-Duty Models
  - Tough, Reinforced Construction
  - 0.090-inch Injection-Molded Polycarbonate Bubble
  - Barrel-Type Key Locks



**DF5 DomePaks** combine a fixed-mount dome enclosure, compact high-resolution camera, and fixed or varifocal lens in an easy-to-order, easy-to-install package.

**DF5 DomePaks** are packaged under a single part number to make ordering easier; and, because they are pre-configured, they are guaranteed to be compatible.

**DF5 DomePaks** are available in a variety of styles for different applications. Select from in-ceiling, pendant (indoor or outdoor), or heavy-duty models. And, because they are designed to look like Spectra III™ Series integrated dome systems, they are the perfect complement to new or existing installations.

DomePak allows choices between color (NTSC or PAL) or monochrome (EIA only) high resolution compact cameras and a variety of lenses ranging from 2.3 mm fixed focal length to 5-50 mm varifocal length lenses. Choose between auto or manual iris.

**DF5 DomePaks** are fashioned after Spectra III integrated dome systems, and have a variety of mounting options available, from wall, corner, pole, or parapet mount.

For fixed dome applications requiring specialty enclosures such as stainless steel or pressurized, see Spectra III Series with DD5-FM fixed mount camera adapter.



**DataFAX**  
SPEC: 21452  
MANUAL: See DataFAX Catalog #2

C1452 / REVISED 12-03

IP66



U.S. Patents 340,940 and 5,224,675

International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## DOME

## MECHANICAL

Cable Entry	0.75-inch conduit fitting
In-ceiling	Through 1.5-inch NPT pendant mount
Pendant	

## ELECTRICAL

Input Voltage	24 VAC (environmental models only)
Input Power	62 VA (for heater)

## GENERAL

Construction	
Back Box	Aluminum
Mounting Bracket	Steel
Bubble	
DF5, DF5S,	Acrylic; smoked, clear, chrome or gold
DF5-PG Series	Polycarbonate; clear, 0.090-inch thick
DF5-HD Series	Acrylic (flat window); smoked, 0.06-inch thick
DF5-OF	Acrylic (flat window); clear, 0.06-inch thick
DF5-1F	

## ENVIRONMENTAL

Environment	(DF5-PG-E0, DF5-PG-E1, or DF5HD-PG-E1)
Outdoor*	-60° to 122°F (-51° to 50°C) continuous operation
	-50° to 122°F (-45° to 50°C) continuous operation; prevents icing
	-40° to 122°F (-40° to 50°C) continuous operation; de-ices (within 3 hours) after power-up
Indoor	(All other models)
	32° to 122°F (0° to 50°C)

\*Assumes no wind chill factor.

## CERTIFICATIONS

- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 1, IP20 standards (indoor models)
- Meets NEMA Type 4, IP66 standards (outdoor models)

## RECOMMENDED MOUNTS

## In-Ceiling Domes

DF5S-SMKIT	Surface mount adapter for DF5S Series with short back box. Includes bezel and hardware.
SCA1	Support rails; use in suspended ceiling applications where additional support is needed.
SD5-P	2' x 2' drop ceiling panel, aluminum construction. Replaces 2' x 2' ceiling tile.

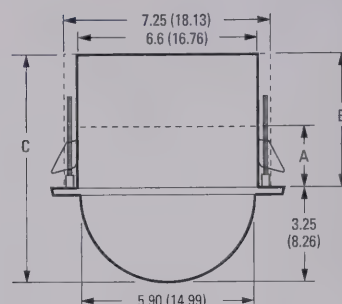
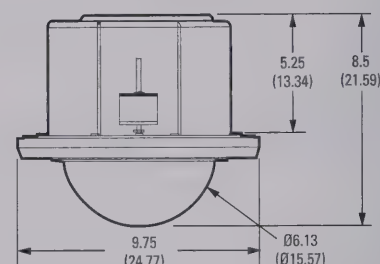
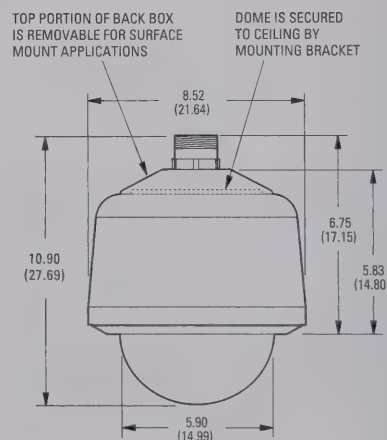
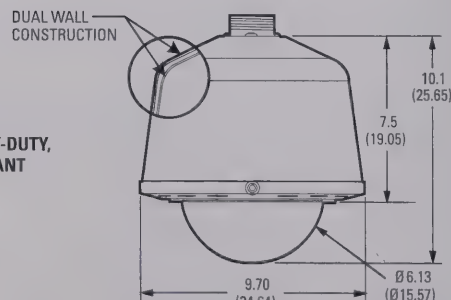
## Pendant Domes

BB5-PCA-BK	Conduit adapter, black
BB5-PCA-GY	Conduit adapter, gray
IWM Series	Wall mount with cable feedthrough. Can be adapted for corner (CM400), pole (PA402) or parapet (PP300L/PP301L, PP400, PP4348) applications.
PP350, PP351	Parapet mount; mounts to inside of parapet
SWM Series	Compact wall mount. Can be adapted for corner (SWM-CA) or pole (SWM-PA) applications.

## RECOMMENDED POWER SUPPLIES

MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

LETTER	MODEL	DIMENSION
A	DF5S SERIES	2.75 (6.99)
B	DF5 SERIES	5.25 (13.34)
C	DF5-OF/DF5-1F	5.60 (14.22)

STANDARD,  
IN-CEILINGHEAVY-DUTY,  
IN-CEILINGSTANDARD,  
PENDANTHEAVY-DUTY,  
PENDANT

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## CAMERA SPECIFICATIONS

	High Resolution, Color, NTSC	High Resolution, Color, PAL	High Resolution, Monochrome, EIA
Image Device	1/3-inch CCD	1/3-inch CCD	1/3-inch CCD
Synchronize System	AC line lock	AC line lock	AC line lock
Horizontal Resolution	480 TVL	480 TVL	560 TVL
Iris Control	Electronic/passive	Electronic/passive	Electronic/passive
Minimum Illumination	0.7 lux, f1.2, 40 IRE, AGC on, 75% reflectance	0.7 lux, f1.2, 40 IRE, AGC on, 75% reflectance	0.1 lux, f1.2, 40 IRE, AGC on, 75% reflectance
ESC	300:1	300:1	300:1
Signal-to-Noise Ratio	>48 dB	>48 dB	>48 dB
Automatic Gain Control	Selectable	Selectable	Selectable
Backlight Compensation	Selectable	Selectable	Selectable
Scanning System	525 lines, 2:1 interlace	625 lines, 2:1 interlace	525 lines, 2:1 interlace
Signal Processing	DSP	DSP	DSP
Auto Iris Lens Type	DC/video control	DC/video control	DC/video control
Video Output	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms	1 Vp-p, 75 ohms
Input Voltage	24 VAC, 60 Hz	24 VAC, 50 Hz	24 VAC, 60 Hz
Power Consumption	3 watts	3 watts	3 watts

## LENS SPECIFICATIONS

### Fixed Focal Lenses

	2.3	2.8	4	8
Focal Length	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Format Size	CS	CS	CS	CS
Mount Type	1.4~Close/1.4~360	1.4~Close/1.4~360	1.2~Close/1.2~360	1.2~Close/1.2~360
Relative Aperture (F)				
Operation				
Iris	Manual / Auto (Direct Drive)	Manual / Auto (Direct Drive)	Manual / Auto (Direct Drive)	Manual / Auto (Direct Drive)
Focus	Manual	Manual	Manual	Manual
Angle of View				
Diagonal	143.2°	121.8°	92.3°	43.8°
Horizontal	116.1°	97.4°	71.6°	34.5°
Vertical	87.4°	72.8°	52.7°	25.6°
Min. Object Distance	0.2m	0.2m	0.2m	0.2m

### Varifocal Lenses

	2.5-6	2.8-12	3-8
Focal Length	2.4X	4.3X	2.7X
Zoom Ratio	1/3-inch	1/3-inch	1/3-inch
Format Size	CS	CS	CS
Mount Type	1.4~Close/1.4~125	1.4~Close/1.4~360	1.0~Close/1.0~360
Relative Aperture (F)			
Operation			
Iris	Manual / Auto (Direct Drive)	Manual / Auto (Direct Drive)	Manual / Auto (Direct Drive)
Focus and Zoom	Manual	Manual	Manual
Angle of View			
Diagonal	56.8°~133.3°	—	44.9°~117.9°
Horizontal	45.6°~107.6°	24.1°~97.4°	35.9°~91.0°
Vertical	34.2°~80.9°	18.1°~72.5°	26.9°~66.6°
Min. Object Distance	0.2m	0.3m	0.2m
Focal Length	5-40	5-50	
Zoom Ratio	8X	10X	
Format Size	1/3-inch	1/3-inch	
Mount Type	CS	CS	
Relative Aperture (F)	1.6~Close/1.6~360	1.4~Close/1.4~185	
Operation			
Iris	Manual / Auto (Direct Drive)	Manual / Auto (Direct Drive)	
Focus and Zoom	Manual	Manual	
Angle of View			
Diagonal	8.8°~66.9°	—	
Horizontal	6.5°~53.6°	5.3°~53.4°	
Vertical	4.8°~40.2°	4.1°~40.1°	
Min. Object Distance	0.5m	0.5m	



## MODEL NUMBERS

To configure a DF5 DomePak, refer to the selection guides below to compile the appropriate model number. Selection guides are grouped according to dome type: **1** Standard In-Ceiling and Pendant, **2** In-Ceiling with Flat Acrylic Window, and **3** In-Ceiling with Shortened Back Box.

**1 Standard In-Ceiling and Pendant Models** **DF5CA-PB-02.3A**

**DF5 Series In-Ceiling**

**DF5 Series Pendant**

**DF5HD-1 Dome**

- DF5** = Standard DF5
- DH5** = Heavy duty DF5
- CA** = Color, NTSC, high resolution, 24 VAC
- CC** = Color, PAL, high resolution, 24 VAC
- MA** = Monochrome, EIA, high resolution, 24 VAC
- PB** = Pendant, black\* (indoor)
- PG** = Pendant, light gray (indoor/outdoor)
- Blank** = In-ceiling back box
- 0** = Smoked dome (1/2 f-stop light loss)\*
- 1** = Clear dome
- 2** = Chrome dome (2 f-stops light loss)\*
- 3** = Gold dome (2 f-stops light loss)\*
- E0** = Outdoor pendant (includes heater and sun shield), smoked dome (1/2 f-stop of light loss)\*
- E1** = Outdoor pendant (includes heater and sun shield), clear dome
- 2.3** = 2.3 mm lens
- 2.8** = 2.8 mm lens
- 4** = 4 mm lens
- 8** = 8 mm lens
- V2** = 2.5-6 mm varifocal lens
- V21** = 2.8-12 mm varifocal lens
- V3** = 3-8 mm varifocal lens
- V5** = 5-40 mm varifocal lens
- V50** = 5-50 mm varifocal lens
- Blank** = No lens
- A** = Auto iris
- Blank** = Manual iris

\*Not available in heavy duty models.

**2 In-Ceiling Models with Flat Acrylic Plate** **DF5CA-0F2.3A**

**DF5-0F Dome**

**DF5S Series**

- DF5** = Series dome
- CA** = Color, NTSC, high resolution, 24 VAC
- CC** = Color, PAL, high resolution, 24 VAC
- MA** = Monochrome, EIA, high resolution, 24 VAC
- 0F** = Smoked flat window (1/2 f-stop light loss)
- 1F** = Clear flat window
- 2.3** = 2.3 mm lens
- 2.8** = 2.8 mm lens
- 4** = 4 mm lens
- Blank** = No lens
- A** = Auto iris
- Blank** = Manual iris

**3 In-Ceiling Models with Shortened Back Box** **DF5SCA-02.3A**

**DF5S Series dome**

- CA** = Color, NTSC, high resolution, 24 VAC
- CC** = Color, PAL, high resolution, 24 VAC
- MA** = Monochrome, EIA, high resolution, 24 VAC
- 0** = Smoked dome (1/2 f-stop light loss)
- 1** = Clear dome
- 2** = Chrome dome (2 f-stops light loss)
- 3** = Gold dome (2 f-stops light loss)
- 2.3** = 2.3 mm lens
- 2.8** = 2.8 mm lens
- 4** = 4 mm lens
- 8** = 8 mm lens
- V2** = 2.5-6 mm varifocal lens
- V21** = 2.8-12 mm varifocal lens
- V3** = 3-8 mm varifocal lens
- V5** = 5-40 mm varifocal lens
- V50** = 5-50 mm varifocal lens
- Blank** = No lens
- A** = Auto iris
- Blank** = Manual iris

For detailed information about DF5 DomePak camera and lens components, refer to the pages referenced below.

**Dome** See Page  
DF5 Series Fixed Mount Dome 205

Cameras		
Color	CA = CCC1370H-2 (NTSC)	93
	CC = CCC1370H-2X (PAL)	93
Monochrome	MA = MCC1370H-2 (EIA)	111

Lenses		
Manual Iris	2.3 = 13FA2.3	125
	2.8 = 13FA2.8	125
	4 = 13FA4	125
	8 = 13FA8	125
	V2 = 13VA2.5-6	131
	V21 = 13VA2.8-12	131
	V3 = 13VA3-8	131
	V5 = 13VA5-40	131
	V50 = 13VA5-50	131
Auto Iris	2.3 = 13FD2.3	129
	2.8 = 13FD2.8	129
	4 = 13FD4	129
	8 = 13FD8	129
	V2 = 13VD2.5-6	133
	V21 = 13VD2.8-12	133
	V3 = 13VD3-8	133
	V5 = 13VD5-40	133
	V50 = 13VD5-50	133

Indicates change or addition.



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## CAMERAS

### High-Performance, Digital Security/Surveillance Cameras

Pelco offers a full range of imaging solutions for a variety of applications. Models range from compact, cost-effective 12 VDC cameras to cameras with enhanced performance features such as day/night, color/black-white capability, LowLight™ (DSS), Extended Dynamic Range (EDR), and Sony EXview HAD™ technology.

Virtually all Pelco cameras are designed and built using today's modern digital circuitry to produce sharp, clear pictures. Resolution ranges from 330 to 480 lines in our color cameras and from 380 to 570 lines in our monochrome versions. Pelco's cameras are both easy to install and versatile, with features you can adjust to meet your specific video security application.



Pelco's cost-effective, compact cameras provide true color reproduction at a great price. They are easy to install and their compact size makes them ideal for the small DF5 and DF8 domes and EH100, EH2508, and EH3508 enclosures. *Series: CCC2400H, CCC2400S, MCC2400S.*

Pelco also offers a line of cameras featuring a standard UTP output (through an easy-connecting RJ-45 connector) and a service connector (handy for local video test monitor output). These cameras mount with a standard 1/4-inch UNC-20 mount or the new PCM150 mount. This line includes high voltage versions and a day/night model, which automatically switches from color to black and white, depending upon light levels. *Series: CC3770H, CC3710H, CC3710S, CC3610H, MC3710H, MC3710S, and MC3610H.*



### CameraPak®

To make ordering easy, we have preselected camera, lens, and mount packages that feature standard- and high-resolution Pelco cameras, including high-resolution EXview™, DSS and Day/Night models.

### Don't forget to ImagePak®

If you need more than just the camera, lens, and mount, create your own camera system using ImagePak. Choose from our select line of cameras, lenses, mounts, and housings to design a customized system. We'll completely assemble the units, back-focus the lens, and factory-test the entire package, free of charge. Let us help you save valuable time and money! Refer to the ImagePak/DomePak selection guides in the Camera Systems section, B.O.S.S., or contact Pelco for assistance in creating your own custom package.

Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about these products can be found on the related specification sheets within this section. For CameraPak models also refer to the applicable lens specification sheet in the Lenses section.

- Camera Selection Guide
- CameraPak Selection Guide

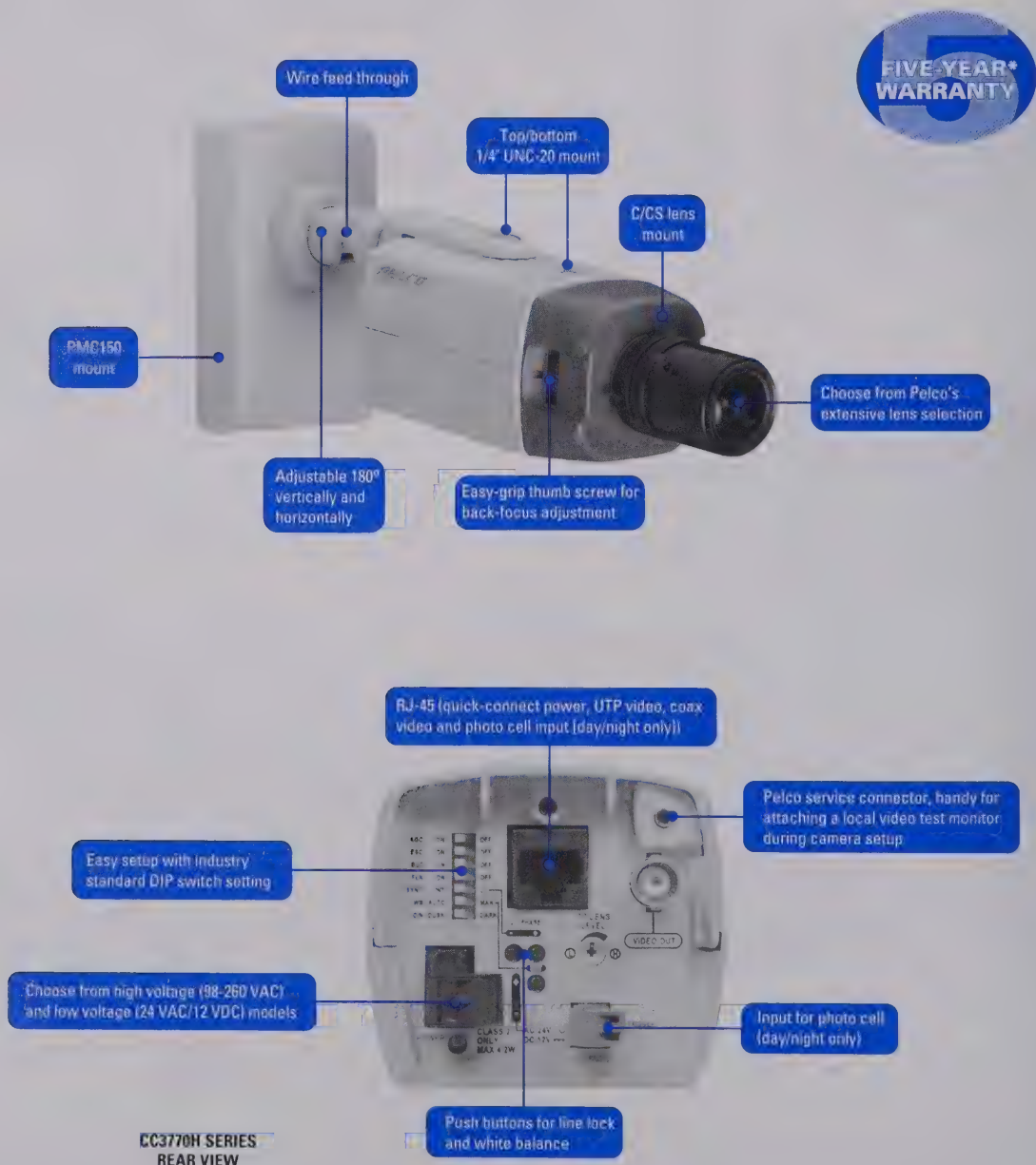


## Introducing...

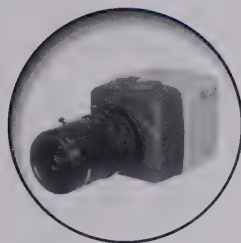
### Premier Case

Pelco's 3610, 3710, and 3770 Series offer feature sets able to handle a wide range of lighting conditions. This collection features a day/night camera that automatically switches from color to black and white, depending upon light levels. It also includes models with enhanced sensitivity. All Premier Case models include a UTP output with an RJ-45 connector to simplify installation. All of Pelco's cameras are competitively priced and backed by the best warranty and customer service in the industry.

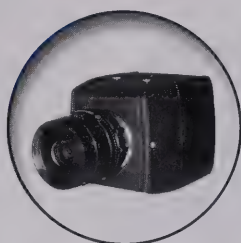
The cameras mount with the PCM150, a new optional mount system that conceals wiring. The mount attaches to the camera with a single screw, for quick installation. The feedthrough cable (prewired) uses RJ-45 connectors to connect power and standard video, along with UTP video, to the camera. Installers no longer have to manage BNC patch cables, power wires and mounting hardware. If the site requirements change, cameras can be quickly and easily changed. This mount also features a quick latch with captive, tamper-resistant screw.



\*See Pelco price list for complete warranty details.



Compact, Gray



Compact, Black



Standard



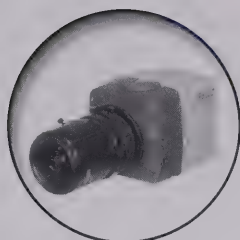
Premier



Integrated Zoom

Camera Format	Resolution	Case Style	Sensitivity	Power*	Camera Model	See Page
Color, NTSC	High	Compact, Gray	Normal	12 VDC	CCC2400H-4	93
		Compact, Black	High	Low Voltage	CCC1370H-2	95
		Standard	EDR	Low Voltage	CC3701H-2	97
			LowLight™	Low Voltage	CC3751H-2	99
		Premier	High	Low Voltage	CC3710H-6	101
			High	High Voltage	CC3710H-7	101
			EXview™	Low Voltage	CC3610H-6	103
			EXview™	High Voltage	CC3610H-7	103
			Day/Night	Low Voltage	CC3770H-6	105
			Day/Night	High Voltage	CC3770H-7	105
		Integrated Zoom	Specialty (Zoom)	24 VAC	CC1400HZ16-2	107
				12 VDC	CC1400HZ16-4	107
	Standard	Compact, Gray	Normal	12 VDC	CCC2400S-4	109
		Premier	High	Low Voltage	CC3710S-6	111
			High	High Voltage	CC3710S-7	111

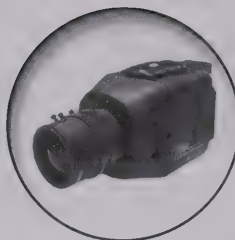
\*See product data sheet for power specifications.



Compact, Gray



Compact, Black



Standard



Premier

Camera Format	Resolution	Case Style	Sensitivity	Power*	Camera Model	See Page
Color, PAL	High	Compact, Gray	Normal	12 VDC	CCC2400H-4X	93
		Compact, Black	High	Low Voltage	CCC1370H-2X	95
		Standard	EDR	Low Voltage	CC3701H-2X	97
			LowLight™	Low Voltage	CC3651H-2X	99
		Premier	High	Low Voltage	CC3710H-6X	101
			High	High Voltage	CC3710H-7X	101
			EXview™	Low Voltage	CC3610H-6X	103
			EXview™	High Voltage	CC3610H-7X	103
			Day/Night	Low Voltage	CC3770H-6X	105
			Day/Night	High Voltage	CC3770H-7X	105
	Standard	Compact, Gray	Normal	12 VDC	CCC2400S-4X	109
		Premier	High	Low Voltage	CC3710S-6X	111
			High	High Voltage	CC3710S-7X	111

\*See product data sheet for power specifications.





Compact, Gray



Compact, Black




Standard



Premier


	Camera Format	Resolution	Case Style	Sensitivity	Power*	Camera Model	See Page
Monochrome	EIA	High	Compact, Black	High	Low Voltage	MCC1370H-2	113
			Standard	LowLight™	Low Voltage	MC3651H-2	115
			Premier	High	Low Voltage	MC3710H-6	117
				High	High Voltage	MC3710H-7	117
				EXview™	Low Voltage	MC3610H-6	119
				EXview™	High Voltage	MC3610H-7	119
		Standard	Compact, Gray	Normal	12 VDC	MCC2400S-4	121
			Premier	High	Low Voltage	MC3710S-6	123
				High	High Voltage	MC3710S-7	123
	CCIR	High	Standard	LowLight™	Low Voltage	MC3651H-2X	115
			Premier	High	Low Voltage	MC3710H-6X	117
				High	High Voltage	MC3710H-7X	117
			EXview™	Low Voltage	MC3610H-6X	119	
			EXview™	High Voltage	MC3610H-7X	119	
			Standard	Compact, Gray	Normal	12 VDC	MCC2400S-4X
		Premier		High	Low Voltage	MC3710S-6X	123
				High	High Voltage	MC3710S-7X	123

\*See product data sheet for power specifications.

Camera Number	CameraPak Prefix	Iris Type	Lens Type	Focal Length	CameraPak Suffix	See Page	
EIA/NTSC							
CCC2400H-4	C2400H-4		Adjustable	Fixed Focal Length (13FA)	2.3 mm	F2.3	127
CCC2400S-4	C2400S-4				2.8 mm	F2.8	127
CC3610H-6	C3610H-6				4 mm	F4	127
CC3610H-7	C3610H-7				8 mm	F8	127
CC3701H-2	C3701H-2			Varifocal (13VA)	1-3 mm	V1	133
CC3710H-6	C3710H-6				2.5-6 mm	V2	133
CC3710H-7	C3710H-7				2.8-12 mm	V21	133
CC3710S-6	C3710S-6				3-8 mm	V3	133
CC3710S-7	C3710S-7				5-40 mm	V5	133
CC3751H-2	C3751H-2				5-50 mm	V50	133
CC3770H-6	C3770H-6				5.5-82.5 mm	V55	133
CC3770H-7	C3770H-7						
MCC2400S-4	M2400S-4		Auto Iris	Fixed Focal Length (13FD)	2.3 mm	F2.3A	131
MC3610H-6	M3610H-6				2.8 mm	F2.8A	131
MC3610H-7	M3610H-7				4 mm	F4A	131
MC3651H-2	M3651H-2				8 mm	F8A	131
MC3710H-6	M3710H-6			Varifocal (13VD)	1-3 mm	V1A	135
MC3710H-7	M3710H-7				2.5-6 mm	V2A	135
MC3710S-6	M3710S-6				2.8-12 mm	V21A	135
MC3710S-7	M3710S-7				3-8 mm	V3A	135
CCIR/PAL							
CCC2400H-4X	C2400H-4X						
CCC2400S-4X	C2400S-4X						
CC3610H-6X	C3610H-6X						
CC3610H-7X	C3610H-7X						
CC3651H-2X	C3651H-2X						
CC3701H-2X	C3701H-2X						
CC3710H-6X	C3710H-6X						
CC3710H-7X	C3710H-7X						
CC3710S-6X	C3710S-6X						
CC3710S-7X	C3710S-7X						
CC3770H-6X	C3770H-6X						
CC3770H-7X	C3770H-7X						
MCC2400S-4X	M2400S-4X						
MC3610H-6X	M3610H-6X						
MC3610H-7X	M3610H-7X						
MC3651H-2X	M3651H-2X						
MC3710H-6X	M3710H-6X						
MC3710H-7X	M3710H-7X						
MC3710S-6X	M3710S-6X						
MC3710S-7X	M3710S-7X						

Each CameraPak part number consists of a prefix (camera component) and suffix (lens component). To create the CameraPak of your choice, select the desired camera and lens components and combine the prefix and suffix part numbers.


Example: **C3710H-6** and **V50A** = **C3710H-6V50A**

Camera Number	CameraPak Prefix	Iris Type	Lens Type	Focal Length	CameraPak Suffix	See Page	
EIA/NTSC							
CC3610H-6	C3610H-6		Fixed Focal Length (13FA)	2.3 mm	F2.3Y	127	
CC3610H-7	C3610H-7			2.8 mm	F2.8Y	127	
CC3710H-6	C3710H-6			4 mm	F4Y	127	
CC3710H-7	C3710H-7			8 mm	F8Y	127	
CC3710S-6	C3710S-6		Varifocal (13VA)	1~3 mm	V1Y	133	
CC3710S-7	C3710S-7			2.5~6 mm	V2Y	133	
CC3770H-6	C3770H-6			2.8~12 mm	V21Y	133	
CC3770H-7	C3770H-7			3~8 mm	V3Y	133	
MC3610H-6	M3610H-6			5~40 mm	V5Y	133	
MC3610H-7	M3610H-7			5~50 mm	V50Y	133	
MC3710H-6	M3710H-6			5.5~82.5 mm	V55Y	133	
MC3710H-7	M3710H-7						
MC3710S-6	M3710S-6		Auto Iris	Fixed Focal Length (13FD)	2.3 mm	F2.3AY	131
MC3710S-7	M3710S-7				2.8 mm	F2.8AY	131
					4 mm	F4AY	131
					8 mm	F8AY	131
		Varifocal (13VD)		1~3 mm	V1AY	135	
				2.5~6 mm	V2AY	135	
				2.8~12 mm	V21AY	135	
				3~8 mm	V3AY	135	
				5~40 mm	V5AY	135	
				5~50 mm	V50AY	135	
				5.5~82.5 mm	V55AY	135	
CCIR/PAL							
CC3610H-6X	C3610H-6X						
CC3610H-7X	C3610H-7X						
CC3710H-6X	C3710H-6X						
CC3710H-7X	C3710H-7X						
CC3710S-6X	C3710S-6X						
CC3710S-7X	C3710S-7X						
CC3770H-6X	C3770H-6X						
CC3770H-7X	C3770H-7X						
MC3610H-6X	M3610H-6X						
MC3610H-7X	M3610H-7X						
MC3710H-6X	M3710H-6X						
MC3710H-7X	M3710H-7X						
MC3710S-6X	M3710S-6X						
MC3710S-7X	M3710S-7X						

Each CameraPak part number consists of a prefix (camera component) and suffix (lens component). To create the CameraPak of your choice, select the desired camera and lens components and combine the prefix and suffix part numbers.

Example: **C3710H-6** and **V3AY** = **C3710H-6V3AY**



Camera Number	CameraPak Prefix	Iris Type	Lens Type	Focal Length	CameraPak Suffix	See Page
<div> <div>EIA/NTSC</div> <div>CC3701H-2</div> <div>C3701H-2</div> <div>CC3751H-2</div> <div>C3751H-2</div> <div>MC3651H-2</div> <div>M3651H-2</div> </div> <div> <div>CCIR/PAL</div> <div>CC3651H-2X</div> <div>C3651H-2X</div> <div>CC3701H-2X</div> <div>C3701H-2X</div> <div>MC3651H-2X</div> <div>M3651H-2X</div> </div>		Adjustable	Fixed Focal Length (13FA)	2.3 mm	F2.3W	127
				2.8 mm	F2.8W	127
				4 mm	F4W	127
				8 mm	F8W	127
			Varifocal (13VA)	1-3 mm	V1W	133
				2.5-6 mm	V2W	133
				2.8-12 mm	V21W	133
				3-8 mm	V3W	133
				5-40 mm	V5W	133
				5-50 mm	V50W	133
				5.5-82.5 mm	V55W	133
		Auto Iris	Fixed Focal Length (13FD)	2.3 mm	F2.3AW	131
				2.8 mm	F2.8AW	131
				4 mm	F4AW	131
				8 mm	F8AW	131
			Varifocal (13VD)	1-3 mm	V1AW	135
				2.5-6 mm	V2AW	135
				2.8-12 mm	V21AW	135
				3-8 mm	V3AW	135
				5-40 mm	V5AW	135
				5-50 mm	V50AW	135
				5.5-82.5 mm	V55AW	135

Each CameraPak part number consists of a prefix (camera component) and suffix (lens component). To create the CameraPak of your choice, select the desired camera and lens components and combine the prefix and suffix part numbers.

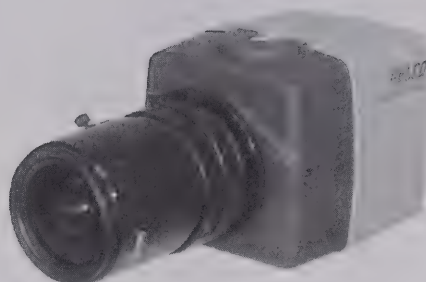
Example: **C3701H-2** and **V5AW** = **C3701H-2V5AW**

## CCC2400H-4 Series CCD Digital Color Camera

### 1/3-INCH, HIGH RESOLUTION, 470 TVL (NTSC/PAL), COMPACT

#### Product Features

- Compact Body Style
- 1/3-Inch Format CCD Imager
- Digital Signal Processing
- 470 TV Lines Resolution
- CS Lens Mount (C-Mount Lenses Require Optional Adapter)
- Electronic Iris
- Automatic Gain Control (AGC)
- Automatic White Balance
- Backlight Compensation
- Internal Top/Bottom Mount
- 12 VDC Power
- Cost Effective



(LENS NOT SUPPLIED WITH CAMERA)

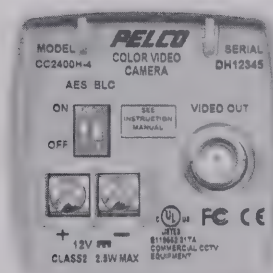
The **CCC2400H-4 Series** is one of Pelco's smallest and most economical cameras, providing true color reproduction and image quality at a great price. Its compact size makes it ideal for Pelco's DF5 and DF8 domes and EH100, EH2508, and EH3508 enclosures.

Cameras in the **CCC2400H-4 Series** use a 1/3-inch format CCD imager and have high resolution of 470 TV lines. They operate on 12 VDC power.

The cameras feature automatic white balance, automatic gain control, an electronic iris, and backlight compensation.

The cameras are easy to install. Connect power and video, and set on/off switches for electronic iris and backlight compensation. Install a lens and adjust the back focus. Camera mounts on the top and bottom of the housing provide flexibility for mounting.

The **CCC2400H-4 Series** has a standard CS lens mount, but with the optional PMCA40 lens adapter, C-mount lenses can be installed. A wide variety of fixed, varifocal, and zoom lenses can be used with either manual or auto iris. Auto iris lenses must be DC drive only. The iris is controlled through a standard four-pin square connector that is included on all Pelco auto iris lenses.



CCC2400H-4 REAR VIEW



**DataFAX**  
**SPEC:** 21997  
**MANUAL:** 219896

C1997 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CCC2400H-4	1/3-inch high resolution digital color CCD camera, 470 TV lines, NTSC format
CCC2400H-4X	Same as CCC2400H-4 except PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	768 (H) x 494 (V) 752 (H) x 582 (V)
Scanning System	525 lines, 2:1 interlace 625 lines, 2:1 interlace
Synchronization System	Internal
Horizontal Resolution	470 TV lines
Iris Control	Selectable by DIP switch setting
Electronic Shutter Range	1/60-1/100,000 second 1/50-1/100,000 second
Auto Iris Lens Type	DC control
Minimum Illumination	1.0 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal-to-Noise Ratio	>48 dB
Automatic Gain Control	Permanently on
Backlight Compensation	Selectable by DIP switch setting
Signal Processing	DSP
Video Output	1 Vp-p, 75 ohms
Auto White Balance Range	2,500° to 9,000°K

## ELECTRICAL

Power Requirements	10.2-13.8 VDC
Power Consumption	Less than 2.5 watts
Power Connector	Screw terminals
Video Connector	BNC
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	CS mount
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Humidity	20% to 80%, non-condensing

## PHYSICAL

Weight (without lens)	0.32 lb (0.147 kg)
Shipping Weight	1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

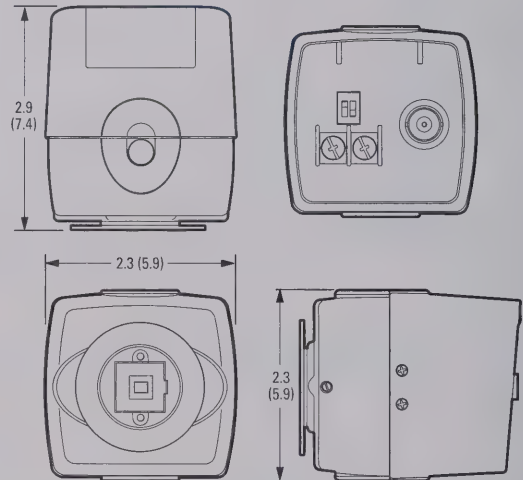
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mount for wall, ceiling, or pedestal mounting
----------------------------------	---

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal lenses, 1/3-inch format. FA (manual iris); FD (auto iris, DD).
13VA, VD Series	Varifocal lenses, 1/3-inch format. VA (manual iris); VD (auto iris, DD).
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format. ZM (manual iris); ZD (auto iris, DD).

## LENS ACCESSORIES

PCMA40	Lens adapter. Adapts standard C-mount lenses to CS-mount cameras.
--------	---



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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**International** Tel: (559) 292-1981 • FAX (559) 348-1120 • DataFAX (559) 292-0435

[www.pelco.com](http://www.pelco.com)

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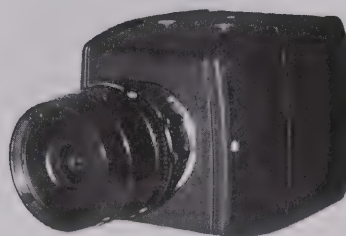


## CCC1370H-2 Series Digital CCD Color Camera

1/3-INCH, HIGH RESOLUTION, 480 TVL (NTSC/PAL), COMPACT

### Product Features

- Compact Body Style
- 1/3-Inch Format CCD Imager
- CS Lens Mount (C-Mount Lenses Require Optional Adapter)
- 24 VAC Power with Line Lock (NTSC)
- 24 VAC Power with Line Lock or 12 VDC with Internal Synchronization (PAL)
- AGC Function
- Backlight Compensation
- Analog Eclipser Function (NTSC Model Only)
- Horizontal Resolution of 480 TV Lines
- Digital Signal Processing
- For Use with DC-Controlled and Video-Drive Auto Iris Lenses or Fixed/Manual Iris Lenses



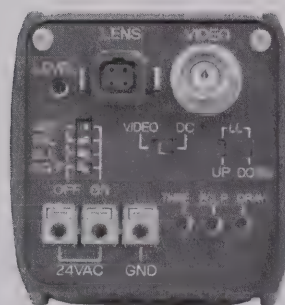
(LENS NOT SUPPLIED WITH CAMERA)

The **CCC1370H-2** is Pelco's smallest digital color CCD camera. The compact camera's high resolution, 1/3-inch imager and high-density image sensor ensure a sharp and clear picture over a wide range of conditions.

The **CCC1370H-2**'s extensive features create top quality picture output in various lighting environments. The camera adjusts automatically to light changes when the automatic gain control is used with a fixed or manual iris lens. The analog eclipser function (NTSC model only) allows the auto-iris lens to create clear images in a dark area with a strongly backlit background. Backlight compensation adjusts the picture to prevent objects from appearing extremely dark due to a strong backlight. The **CCC1370H-2** integrates other fine-tuning functions such as automatic sensitivity adjustment, real-time auto white balance, and auto iris lens output.

The **CCC1370H-2** has a standard CS lens mount and can be used with fixed, manual, or auto iris (DC or video drive controlled) lenses. The iris is controlled through a standard four-pin square connector that is included on all Pelco auto iris lenses.

The **CCC1370H-2** has a quick-connect power connection, BNC video connector, and a standard 1/4-20 screw for top or bottom mounting. The camera is quick and easy to install and is ideal for use with DF5, DF8A, EH100, EH3508, and EH2508 enclosures. The camera is also featured in Pelco's DomePak® and ImagePak® fixed camera dome/enclosure packages.



CCC1370H-2 SHOWN



DataFAX

SPEC: 21938

MANUAL: 219616

C1938 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CCC1370H-2

1/3-inch, high resolution digital color CCD camera, 24 VAC, 60 Hz, NTSC format

CCC1370H-2X

1/3-inch, high resolution digital color CCD camera, 24 VAC, 50 Hz/12VDC, PAL format

## GENERAL

CCD Sensor  
Picture Elements  
CCC1370H-2  
CCC1370H-2X  
Sensing Area  
Synchronization System  
CCC1370H-2  
CCC1370H-2X  
Horizontal Resolution  
Iris Control  
Minimum Illumination  
ESC  
Signal-to-Noise Ratio  
Gain Control  
Vertical Phase  
Automatic Gain Control  
Backlight Compensation  
Scanning System  
CCC1370H-2  
CCC1370H-2X  
Signal Processing  
Auto Iris Lens Type  
Video Output

1/3-inch interline transfer  
768 (H) x 494 (V) (approx. 380K)  
752 (H) x 582 (V) (approx. 440K)  
3/16 x 1/8-inch (4.7 x 3.5 mm)  
AC line lock  
AC line lock/DC internal  
480 TV lines  
Electronic/passive  
0.7 lux, f1.2, 40 IRE, AGC on, 75% reflectance  
300:1  
>48 dB  
Automatic  
Adjustable  $\pm 90^\circ$   
Selectable  
Selectable  
525 lines, 2:1 interlace  
625 lines, 2:1 interlace  
DSP  
DC/video control  
1 Vp-p, 75 ohms

## ELECTRICAL

Power Consumption  
Power Requirements  
CCC1370H-2  
CCC1370H-2X  
Power Connector  
Video Connector  
Lens Jack

3 watts  
24 VAC, 60 Hz  
24 VAC, 50 Hz/12 VDC  
3-pin terminal strip, push-in type  
BNC  
4-pin connector (miniature square)

## MECHANICAL

Lens Mount  
Camera Mount

CS mount  
1/4-inch UNC-20 screw, top and bottom of camera housing

## ENVIRONMENTAL

Operating Temperature  
Storage Temperature  
Humidity

14°F to 122°F (-10°C to 50°C)  
-40° to 140°F (-40° to 60°C)  
20% to 80% (non-condensing)

## PHYSICAL

Weight (without lens)  
Shipping Weight

0.40 lb (0.20 kg)  
1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

BS1750/CM1750/  
CM1750S/TB1750

Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.

## RECOMMENDED POWER SUPPLIES

TF2000  
MCS Series  
WCS Series

Power supply for one 24 VAC camera, 20 VA  
Multiple 24 VAC camera power supply, indoor  
Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series  
13VA, VD Series  
13ZD, ZM Series

Fixed focal length lenses, 1/3-inch format.  
FA (manual iris); FD (auto iris, DD).  
Varifocal lenses, 1/3-inch format.  
VA (manual iris); VD (auto iris, DD).  
Motorized zoom lenses, 1/3-inch format.  
ZD (auto iris, DD); ZM (manual iris).

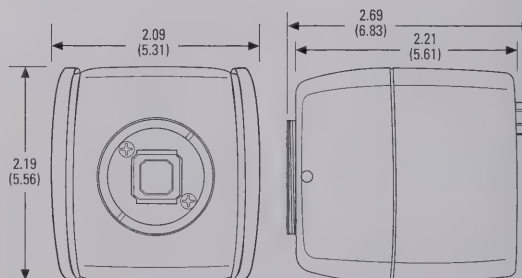
## LENS ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.

PCMA40

Lens adapter. Adapts standard C-mount lenses to CS-mount cameras.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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**www.pelco.com**

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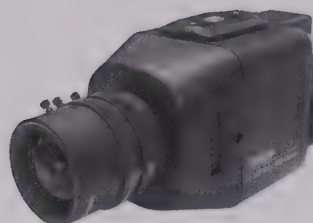
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## CC3701H-2 Series Digital CCD Color Camera

1/3-INCH, HIGH RESOLUTION WITH EDR, 480 TVL (NTSC/PAL)

### Product Features

- Sony SuperHAD™ Technology
- EDR (Extended Dynamic Range)
- 1/3-Inch Format CCD Imager
- C/CS Lens Mount
- DC/Video Drive Auto Iris Lens Compatibility
- 24 VAC/12 VDC Power
- Line Lock With Phase Adjustment
- Automatic Gain Control (AGC)
- Backlight Compensation
- Electronic Iris
- Horizontal Resolution of 480 TV Lines
- Digital Signal Processing
- Low Profile Top/Bottom Mount
- Optional Integral Feedthrough Mount



(REAR COVER REMOVED)



CAMERA MOUNTED ON  
PCM100 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **CC3701H-2 Series** is a high-resolution, high sensitivity, general purpose digital camera with 480 TV lines. The camera features two color balance settings, automatic gain control, digital signal processing, automatic backlight compensation, and line lock. To adjust one of the camera's many fine-tuning features, just reset the corresponding DIP switch, readily available on the left side of the camera.

Utilizing innovative technology (patent pending), the **CC3701H-2 Series** camera provides an extended dynamic range over conventional high resolution cameras, without sacrificing sensitivity, color imagery, or resolution. Extended dynamic range (12X) allows the camera to provide a picture in many extreme light applications.

The **CC3701H-2 Series** digital color camera is smaller than most other full-featured CCD cameras. In order to keep the camera as small as possible, Pelco engineers designed the camera components to fit within the external dimensions of the unit. Since the BNC, power, and lens connectors stay within the boundaries of the case, the compact camera and a lens fit perfectly inside one of Pelco's smaller enclosures (EH100, EH3508, EH2508, EH2020, EH2100, and EH2200). Pelco also has a wide selection of fixed and varifocal lenses available to meet your installation requirements.

The **CC3701H-2 Series** digital camera also includes Sony's latest generation of 1/3-inch CCD imagers, accepts DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera.

The **CC3701H-2 Series** digital camera is quick and easy to install, and its distinctive design is ideal for use in confined spaces. The camera has a quick-connect power connection, BNC video connector, and a removable mount adapter for top or bottom mounting.

Accessories include the PCM100 camera mount designed specifically for the **CC3701H-2 Series**. This adjustable mount has no exposed cabling or hardware. All cable is integrated in the unit making installation quick and easy. The PCM100 can be installed directly to a wall or ceiling, or it can be adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box.



DataFAX  
SPEC: 21937  
MANUAL: 219376



C1937 / REVISED 11-03

U.S. Patent D-460,773

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

CC3701H-2	1/3-inch high resolution digital color CCD camera, 480 TVL, NTSC format
CC3701H-2X	Same as CC3701H-2 except PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
CC3701H-2	768 (H) x 494 (V)
CC3701H-2X	752 (H) x 582 (V)
Scanning System	
CC3701H-2	525 lines, 2:1 interlace
CC3701H-2X	625 lines, 2:1 interlace
Synchronization System	
CC3701H-2	Internal or line lock
CC3701H-2X	Internal or line lock
Horizontal Resolution	480 TV lines
Iris Control	Electronic/passive
Minimum Illumination	0.5 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal-to-Noise Ratio	52 dB
Gain Control	Automatic
Vertical Phase	Adjustable 0° ±120°
Automatic Gain Control	Selectable by DIP switch
Backlight Compensation	Selectable by DIP switch
Signal Processing	DSP
Auto Iris Lens Type	DC/video control
Video Output	1 Vp-p, 75 ohms
Iris Control Range	1/60-1/100,000 second
Auto White Balance Range	2,500° to 9,500°K

## ELECTRICAL

Power Requirements	18-30 VAC or 10-36 VDC
Power Consumption	Less than 4 watts
Power Connector	2-pin terminal strip, push-in type, with screw lock
Video Connector	BNC
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top and bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)

## PHYSICAL

Weight (without lens)	0.77 lb (0.35 kg)
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- Complies with Argentina compliance requirements under Res. 92/98
- FCC, Class B
- U.S. Patent D-460,773
- CQC (China Quality Certification)

## RECOMMENDED MOUNTS

BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling, or pedestal mounting.
PCM100	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box.

## RECOMMENDED POWER SUPPLIES

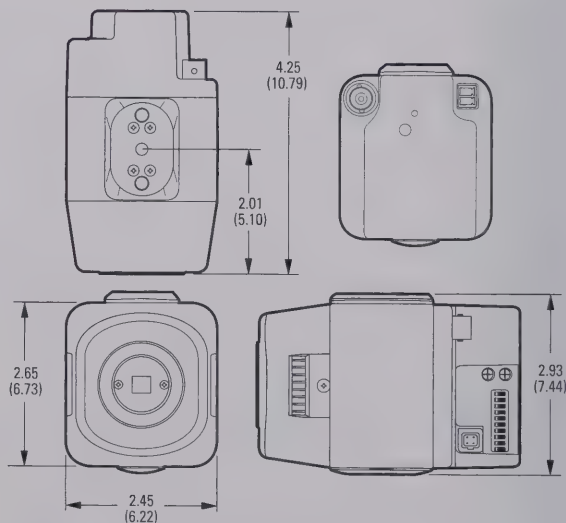
TF2000	Power supply for one 24 VAC camera, 20 VA.
MCS Series	Multiple 24 VAC camera power supply, indoor.
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format. FA (manual iris); FD (auto iris, DD).
13VA, VD Series	Varifocal lenses, 1/3-inch format. VA (manual iris); VD (auto iris, DD).
13ZD, ZM Series	Motorized zoom lenses, 1/3-inch format. ZD (auto iris, DD); ZM (manual iris).

## LENS ACCESSORIES

LDC100	Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.
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NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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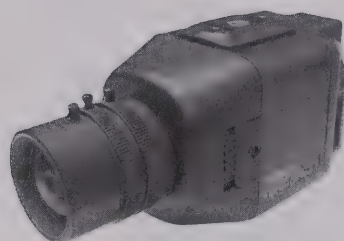
SuperHAD™ is a trademark of the Sony Corporation.  
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## CC3751H-2/CC3651H-2X Digital CCD Color Camera

### LOWLIGHT™ DSS, 1/3-INCH, HIGH RESOLUTION, 480 TVL (NTSC/PAL)

#### Product Features

-  LowLight™ Technology
- Compact Body Style, Shorter Overall Than Most Full-Featured CCD Cameras
- 1/3-Inch Format CCD Imager
- C/CS Lens Mount
- 24 VAC/12 VDC Power
- Line Lock With Phase Adjustment
- Backlight Compensation
- Horizontal Resolution of 480 TV Lines
- For Use with Direct Drive and Auto Iris Lenses or Fixed/Manual Iris Lenses
- Removable Top/Bottom Mount
- Low Profile Mounting Block
- Optional Integral Feedthrough Mount



(REAR COVER REMOVED)



CAMERA MOUNTED ON  
PCM100 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

Designed and manufactured in the USA, the **CC3751H-2** and **CC3651H-2X** color cameras have extended digital slow shutter (DSS) settings to enhance the low-light performance of the camera. DSS settings slow the picture frame rate and increase the camera's sensitivity in low light conditions. Light sensitivity increases as the number of fields of integration increase. The cameras have four DSS settings:

- Off to disable the DSS mode
- Four fields of integration maximum (1/15-second update rate)
- Fifteen fields of integration maximum (1/4-second update rate)
- Thirty fields of integration maximum (1/2-second update rate)

The **CC3751H-2** and **CC3651H-2X** have a 1/3-inch imager and produce a horizontal resolution of 480 TV lines. Special camera settings include electronic shutter control, phase adjustment, enhanced sharpness, long line compensation, backlight compensation, and automatic gain control.

The cameras also have a direct drive/auto iris lens connector and adjustable back focus for C/CS lenses. Back focus adjustment is simple with the easy-to-grip thumb wheel, accessible from the top or bottom of the camera.

Smaller than most full-featured CCD cameras, the **CC3751H-2** and **CC3651H-2X** are ideal for use with one of Pelco's smaller enclosures (EH100, EH3500, EH2500, EH2020, and EH2100). Pelco has a wide selection of fixed and varifocal lenses available for the cameras to meet your installation requirements.

The **CC3751H-2** and **CC3651H-2X** are quick and easy to install and ideal for use in confined spaces. The cameras have a quick-connect power connection, BNC video connector, and a removable mount adapter for top or bottom mounting.

Accessories include the PCM100 camera mount designed specifically for the **CC3751H-2** and **CC3651H-2X**. This adjustable mount has no exposed cabling or hardware. All cable is integrated in the unit making installation quick and easy. The PCM100 can be installed directly to a wall or ceiling, or it can be adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box.



DataFAX

SPEC: 21988

MANUAL: 219886 (CC3751H-2), 219846 (CC3651H-2X)



International Organization  
for Standardization  
Registered ISO 9001



C1988 / REVISED 10-03

U.S. Patent D-460,773

## MODELS

CC3751H-2	1/3-inch high resolution digital color CCD camera, 480 TVL, NTSC format
CC3651H-2X	1/3-inch high resolution digital color CCD camera, 480 TVL, PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
CC3751H-2	768 (H) x 494 (V)
CC3651H-2X	795 (H) x 696 (V)
Sensing Area	
CC3751H-2	6 mm diagonal
CC3651H-2X	6.3 mm (H) x 4.7 mm (V)
Scanning System	
CC3751H-2	525 lines, 2:1 interlace
CC3651H-2X	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	480 TV lines
Iris Control	Electronic/passive
Minimum Illumination	0.01 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal-to-Noise Ratio	50 dB
Gain Control	Automatic
Vertical Phase	Adjustable 0° ± 170°
Backlight Compensation	Selectable by DIP switch setting
Signal Processing	DSP
Auto Iris Lens Type	DC/video control
Video Output	1 Vp-p, 75 ohms
Electronic Shutter	
Control Range	1/60-1/100,000 second

## ELECTRICAL

Power Requirements	18-30 VAC or 10-36 VDC
Power Consumption	Less than 3.3 watts
Power Connector	2-pin terminal strip, push-in type
Video Connector	BNC
Lens Jack	4-pin connector (miniature square with screw lock)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top and bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)

## PHYSICAL

Weight (without lens)	0.77 lb (0.35 kg)
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class B (CC3751H-2)/Class A (CC3651H-2X)
- UL Listed
- UL Listed to Canadian safety standards
- Complies with Argentina compliance requirements under Res. 92/98
- FCC, Class B
- U.S. Patent D-460,773

## RECOMMENDED MOUNTS

BS1750/CM1750/  
CM1750S/TB1750

Adjustable swivel head camera mounts for wall, ceiling, or pedestal mounting.

PCM100

Adjustable camera mount for wall or ceiling application. Includes inte-grated cable for easy plug and play operation. Can also be adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box.

## RECOMMENDED POWER SUPPLIES

TF2000

Power supply for one 24 VAC camera, 20 VA

MCS Series

Multiple 24 VAC camera power supply, indoor

WCS Series

Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series

Fixed focal length lenses, 1/3-inch format. FA manual iris; FD (auto iris, DD).

13VA, VD Series

Varifocal lenses, 1/3-inch format. VA (manual iris); VD (auto iris, DD).

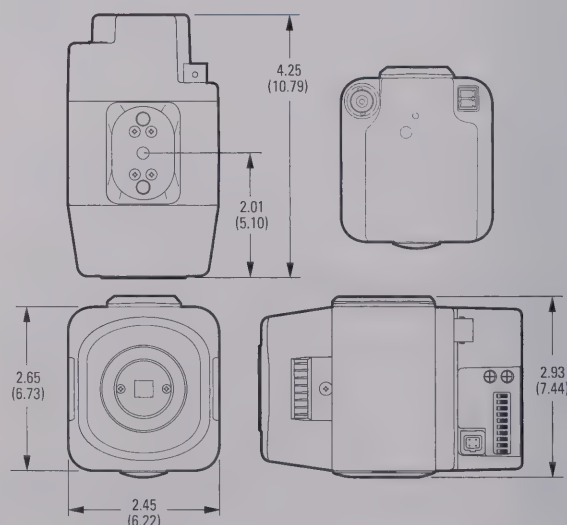
13ZD, ZM Series

Motorized zoom lenses, 1/3-inch format. ZD (auto iris, DD); ZM (manual iris).

## LENS ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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[www.pelco.com](http://www.pelco.com)

Indicates change or addition.

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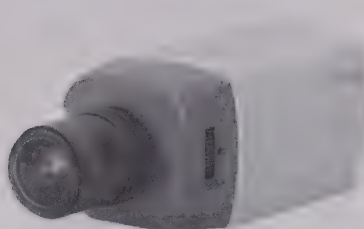


## CC3710H Series Digital CCD Color Camera

1/3-INCH, HIGH RESOLUTION, 480 TVL (NTSC/PAL)

### Product Features

- 1/3-Inch Format CCD Imager
- Digital Signal Processing
- 480 TV Lines Resolution
- 0.7 Lux Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Broad Spectrum Automatic White Balance
- Phase Adjustable Line Lock
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **CC3710H Series** is a high resolution digital camera with 480 TV lines.

The **CC3710H Series** digital camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features broad spectrum automatic white balance, automatic gain control, electronic shutter control, digital signal processing, automatic backlight compensation, flickerless mode, and line lock with phase adjust. To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **CC3710H Series** digital camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **CC3710H Series**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall, ceiling, or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22916  
MANUAL: 229146

C2916 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CC3710H-6	1/3-inch high resolution digital color CCD camera, 480 TVL, 24 VAC or 12 VDC, NTSC format
CC3710H-6X	Same as CC3710H-6 except PAL format
CC3710H-7	1/3-inch high resolution digital color CCD camera, 480 TVL, 98-260 VAC, NTSC format
CC3710H-7X	Same as CC3710H-7 except PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
NTSC	768 (H) x 494 (V)
PAL	752 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
NTSC	525 lines, 2:1 interlace
PAL	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	480 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
NTSC	1/60-1/100,000 second
PAL	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.7 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable $\pm 120^\circ$
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
Auto White Balance	On/off switchable
Signal Processing	Digital Signal Processing (DSP)
Video Output	1 Vp-p, 75 ohms
Auto White Balance Range	2,500° to 9,000°K
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
CC3710H-6, H-6X	20.4-27.6 VAC or 10.2-13.8 VDC
CC3710H-7, H-7X	98-260 VAC
Power Consumption	Less than 5 watts
Power Connector	
CC3710H-6, H-6X	2-pin terminal strip
CC3710H-7, H-7X	Integral power cable
Video Connector	BNC
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
----------------------	----------------

## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)



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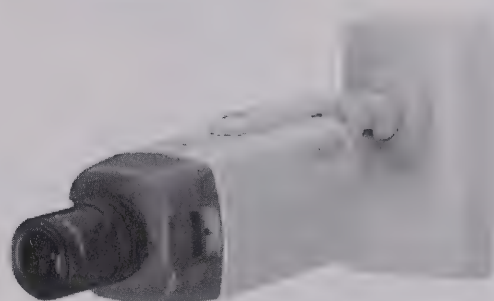
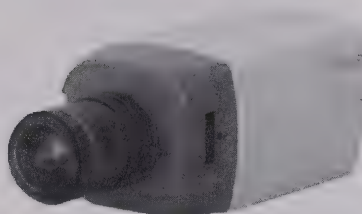


## CC3610H Series Digital CCD Color Camera

1/3-INCH, HIGH RESOLUTION, ENHANCED SENSITIVITY, 480 TVL (NTSC/PAL)

### Product Features

- Sony EXview HAD™ Technology
- 1/3-Inch Format CCD Imager
- Digital Signal Processing
- 480 TV Lines Resolution
- 0.4 Lux Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Broad Spectrum Automatic White Balance
- Phase Adjustable Line Lock
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **CC3610H Series** is a high resolution digital color camera with Sony EXview HAD technology for enhanced light sensitivity at 0.4 lux.

The **CC3610H Series** digital camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features broad spectrum automatic white balance, automatic gain control, electronic shutter control, digital signal processing, automatic backlight compensation, flickerless mode, and line lock with phase adjust. To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **CC3610H Series** digital color camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **CC3610H Series**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall or ceiling or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22914  
MANUAL: 229146

C2914 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

CC3610H-6	1/3-inch high resolution digital color CCD camera, 480 TVL, 24 VAC or 12 VDC, NTSC format
CC3610H-6X	Same as CC3610H-6 except PAL format
CC3610H-7	1/3-inch high resolution digital color CCD camera, 480 TVL, 98-260 VAC, NTSC format
CC3610H-7X	Same as CC3610H-7 except PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer EXview HAD™ CCD
Picture Elements	
NTSC	768 (H) x 494 (V)
PAL	752 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
NTSC	525 lines, 2:1 interlace
PAL	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	480 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
NTSC	1/60-1/100,000 second
PAL	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.4 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable ±120°
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
Auto White Balance	On/off switchable
Signal Processing	Digital Signal Processing (DSP)
Video Output	1 Vp-p, 75 ohms
Auto White Balance Range	2,500° to 9,000°K
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
CC3610H-6, H-6X	20.4-27.6 VAC or 10.2-13.8 VDC
CC3610H-7, H-7X	98-260 VAC
Power Consumption	Less than 5 watts
Power Connector	
CC3610H-6, H-6X	2-pin terminal strip
CC3610H-7, H-7X	Integral power cable
Video Connector	BNC
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
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## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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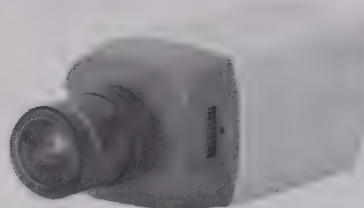


# CC3770H Digital CCD Day/Night, Color/B-W Camera

## 1/3-INCH, HIGH RESOLUTION, 480 TVL (NTSC/PAL)

### Product Features

- Day/Night, Color/Black-White Automatic or Manual Operation
- Dual Threshold Setting (Dusk/Dark)
- 1/3-Inch Format CCD Imager
- Digital Signal Processing
- 480 TV Lines Resolution
- 0.7 Lux (Color Mode) / 0.05 Lux (B-W Mode) Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Phase Adjustable Line Lock
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **CC3770H** is a high resolution digital day/night camera that switches from color to black and white mode, depending upon available light. The camera uses a removable infrared (IR) cut filter in color mode and an optical low-pass filter (LPF) in black and white for optimal image quality at any time of day. The **CC3770H** has a sensitivity of 0.7 lux in color mode and 0.05 lux in black and white mode.

The **CC3770H** digital camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features broad spectrum automatic white balance, automatic gain control, electronic shutter control, digital signal processing, automatic backlight compensation, flickerless mode, and line lock with phase adjust. To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **CC3770H** digital color/black-white camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **CC3770H**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall or ceiling or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22915  
MANUAL: 229156

C2915 / NEW 10-03



International Organization  
for Standardization,  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

CC3770H-6	1/3-inch high resolution digital color/black-white CCD camera, 480 TVL, 24 VAC or 12 VDC, NTSC format
CC3770H-6X	Same as CC3770H-6 except PAL format
CC3770H-7	1/3-inch high resolution digital color/black-white CCD camera, 480 TVL, 98-260 VAC, NTSC format
CC3770H-7X	Same as CC3770H-7 except PAL format

## GENERAL

Day/Night Operation	Infrared (IR) cut filter with optical low-pass filter (LPF)
Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
NTSC	768 (H) x 494 (V)
PAL	752 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
NTSC	525 lines, 2:1 interlace
PAL	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	480 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
NTSC	1/60-1/100,000 second
PAL	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.7 lux, f1.2, 40 IRE, AGC on, 75% reflectance (color mode)
	0.09 lux, f1.2, 40 IRE, AGC on, 75% reflectance (B-W mode)
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable $\pm 120^\circ$
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
Auto White Balance	On/off switchable
D/N Dusk Dark	On/off switchable
Signal Processing	Digital Signal Processing (DSP)
Video Output	1 Vp-p, 75 ohms
Auto White Balance Range	2,500° to 9,000°K
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
CC3770H-6, H-6X	20.4-27.6 VAC or 10.2-13.8 VDC
CC3770H-7, H-7X	98-260 VAC
Power Consumption	Less than 6 watts
Power Connector	
CC3770H-6, H-6X	2-pin terminal strip
CC3770H-7, H-7X	Integral power cable
Video Connector	BNC
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)
Input for Photo Cell	RJ-45 or 2-pin terminal strip

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
----------------------	----------------

## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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# CC1400HZ16-\* Series Digital CCD Color Camera

1/4-INCH, HIGH RESOLUTION, 16X ZOOM LENS, 470 TVL (NTSC)

## Product Features

- Compact Body Style
- 1/4-Inch Format CCD Imager
- High Resolution
- Built-in 16X Optical Zoom Lens with 8X Digital Zoom
- Horizontal Resolution of 470 TV Lines
- Digital Signal Processing
- AC Line Lock (24 VAC only)
- Auto White Balance
- RS-422 Interface (via MRD1400HZ16)
- Auto Iris, Auto Focus
- Controller Interface Available



CAMERAS,  
COLOR, HIGH RESOLUTION

The **CC1400HZ16-\* Series** DSP Color CCD Camera combines high resolution imaging and a built-in lens in a compact package. This camera uses a 1/4-inch color CCD (charged coupled device) interline transfer sensing element. The built-in lens has a maximum zoom ratio of 128X (16X optical and 8X digital).

The telephoto (zoom in), white balance, and wide angle (zoom out) controls are push buttons located on the back of the camera. When you press and hold the telephoto button, the camera reaches maximum optical magnification (16X). If you continue to press and hold the telephoto button, the camera automatically goes into 8X digital zoom. The white balance control renders colors based on the amount of white in the scene. Once you set the white balance, the camera holds the setting until you adjust the white balance again.

Additional adjustments can be made by connecting the camera to an MRD1400HZ16 camera control interface. The RS-422 interface can be used with keyboard controllers or matrix switchers (see Optional Accessories).



MRD1400HZ16 CONTROL WITH CAMERA AND CM1750 MOUNT



DataFAX  
SPEC: 21960

MANUAL: 219606 (CC1400HZ16 Series), 219736 (MRD1400HZ16)

C1960 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CC1400HZ16-2

1/4-inch high resolution, color camera with 128X zoom lens, NTSC, 24 VAC

CC1400HZ16-4

1/4-inch high resolution, color camera with 128X zoom lens, NTSC, 12 VDC

## GENERAL

Imaging Device  
Signal System  
Pixels  
Scanning System  
Synchronization System  
12 VDC  
24 VAC  
Horizontal Resolution  
Signal-to-Noise Ratio  
Minimum Illumination  
Gain Control  
Exposure  
White Balance  
Focal Length  
Zoom Ratio  
Minimum Focus Distance  
Focus Mode  
Iris Control  
Camera Control

Color 1/4-inch interline transfer CCD  
NTSC  
768 (H) x 508 (V)  
525 lines, 2:1 interlace  
  
Internal synchronization  
External AC line lock  
470 TV lines  
>46 dB  
1.2 lux, f1.2, 40 IRE, AGC on, 75% reflectance  
Automatic  
Automatic (1/60-1/10,000)  
Manual  
3.9 to 63 mm  
16X optical zoom, 8X digital zoom (128X total)  
0.01m (wide angle), 1.20m (telephoto)  
Auto focus  
Automatic  
RS-422 cable interfaced with PC

## ELECTRICAL

Power Requirements  
CC1400HZ16-2  
CC1400HZ16-4  
Power Consumption  
Video Output

24 VAC, 60 Hz  
12 VDC, 60 Hz  
4 watts maximum (camera only)  
Composite output, 75 ohms terminated

## ENVIRONMENTAL

Operating Temperature  
Storage Temperature  
Humidity

32° to 113°F (0° to 45°C)  
32° to 140°F (0° to 60°C)  
0% to 80% relative humidity

## PHYSICAL

Construction  
Finish  
Unit Weight  
CC1400HZ16-2  
CC1400HZ16-4  
Shipping Weight

Aluminum case  
Neutral gray  
0.75 lb (0.34 kg)  
0.95 lb (0.43 kg)  
2 lb (0.90 kg) approximate

## CERTIFICATIONS

- UL Listed
- FCC, Class B

## RECOMMENDED MOUNTS

CM1750

Universal wall, ceiling, or pedestal camera mount with adjustable swivel head

CM1750S

Same as CM1750 except shorter

## RECOMMENDED POWER SUPPLIES

(For use with 24 VAC models only)

TF2000

Power supply for one 24 VAC camera, 20 VA

MCS Series

Multiple 24 VAC camera power supply, indoor

WCS Series

Singe/multiple 24 VAC camera power supply, outdoor

## OPTIONAL ACCESSORIES

MRD1400HZ16

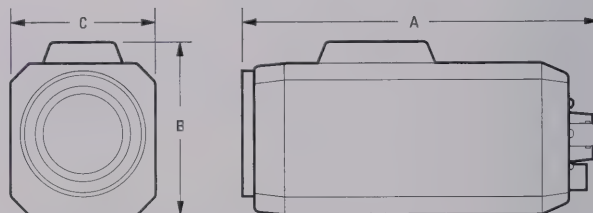
Camera interface control that can be mounted directly to a wall, or installed in a DF5, DF8A, or EH3512 Series enclosure. Mount adapters and interface cable supplied. The MRD1400HZ16 can be used with the following controllers and matrix switchers:

Controllers  
(direct mode only)

MPT9500  
CM9760-KBD Series  
KBD200A  
KBD300A

Matrix Switchers  
(configured for D or P protocols only)

CM6700 Series  
CM6800 Series  
CM9740 Series  
CM9760 Series



	A	B	C
C1400HZ16-4	4.42 (11.20)	2.36 (5.99)	2.27 (5.77)
C1400HZ16-2	5.63 (14.30)	2.36 (5.99)	2.27 (5.77)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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**www.pelco.com**

Indicates change or addition.

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## CCC2400S-4 Series CCD Digital Color Camera

1/3-INCH, STANDARD RESOLUTION, 330 TVL (NTSC/PAL), COMPACT

### Product Features

- Compact Body Style
- 1/3-Inch Format CCD Imager
- Digital Signal Processing
- 330 TV Lines Resolution
- CS Lens Mount (C-Mount Lenses Require Optional Adapter)
- Electronic Iris
- Automatic Gain Control (AGC)
- Automatic White Balance
- Backlight Compensation
- Internal Top/Bottom Mount
- 12 VDC Power
- Cost Effective



(LENS NOT SUPPLIED WITH CAMERA)

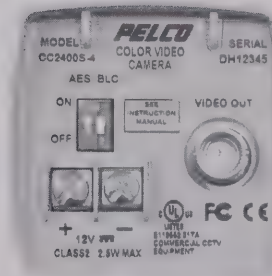
The **CCC2400S-4 Series** is one of Pelco's smallest and most economical cameras, providing true color reproduction and image quality at a great price. Its compact size makes it ideal for Pelco's DF5 and DF8 domes and EH100, EH2508, and EH3508 enclosures.

Cameras in the **CCC2400S-4 Series** use a 1/3-inch format CCD imager and have standard resolution of 330 TV lines. They operate on 12 VDC power.

The cameras feature automatic white balance, automatic gain control, an electronic iris, and backlight compensation.

The cameras are easy to install. Connect power and video, and set on/off switches for electronic iris and backlight compensation. Install a lens and adjust the back focus. Camera mounts on the top and bottom of the housing provide flexibility for mounting.

The **CCC2400S-4 Series** has a standard CS lens mount, but with the optional PMCA40 lens adapter, C-mount lenses can be installed. A wide variety of fixed, varifocal, and zoom lenses can be used with either manual or auto iris. Auto iris lenses must be DC drive only. The iris is controlled through a standard four-pin square connector that is included on all Pelco auto iris lenses.



CCC2400S-4 REAR VIEW



DataFAX  
SPEC: 21996  
MANUAL: 219896

C1996 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

CCC2400S-4	1/3-inch standard resolution digital color CCD camera, 330 TV lines, NTSC format
CCC2400S-4X	Same as CCC2400S-4 except PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	510 (H) x 492 (V) 500 (H) x 582 (V)
Scanning System	525 lines, 2:1 interlace 625 lines, 2:1 interlace
Synchronization	Internal
Horizontal Resolution	330 TV lines
Iris Control	Selectable by DIP switch setting
Electronic Shutter Range	1/60-1/100,000 second 1/50-1/100,000 second
Auto Iris Lens Type	DC control
Minimum Illumination	0.9 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal-to-Noise Ratio	>48 dB
Automatic Gain Control	Permanently on
Backlight Compensation	Selectable by DIP switch setting
Signal Processing	DSP
Video Output	1 Vp-p, 75 ohms
Auto White Balance Range	2,500° to 9,000°K

## ELECTRICAL

Power Requirements	10.2-13.8 VDC
Power Consumption	Less than 2.5 watts
Power Connector	Screw terminals
Video Connector	BNC
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	CS mount
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Humidity	20% to 80%, non-condensing

## PHYSICAL

Weight (without lens)	0.32 lb (0.147 kg)
Shipping Weight	1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

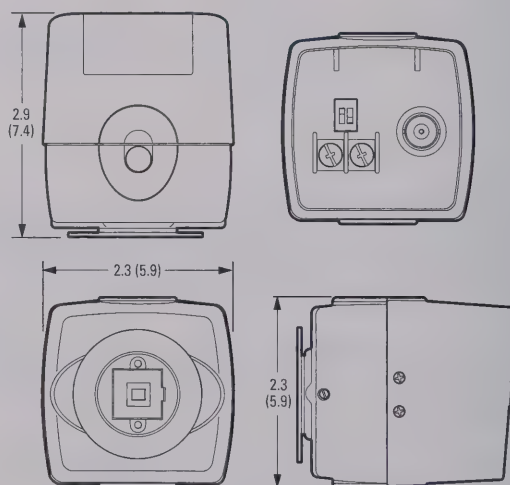
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mount for wall, ceiling, or pedestal mounting
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## RECOMMENDED LENSES

13FA, FD Series	Fixed focal lenses, 1/3-inch format. FA (manual iris); FD (auto iris, DD).
13VA, VD Series	Varifocal lenses, 1/3-inch format. VA (manual iris); VD (auto iris, DD).
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format. ZM (manual iris); ZD (auto iris, DD).

## LENS ACCESSORIES

PCMA40	Lens adapter. Adapts standard C-mount lenses to CS-mount cameras.
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NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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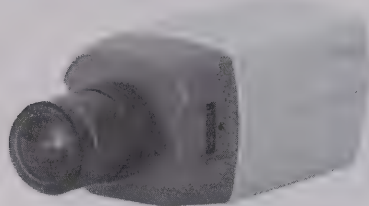


# CC3710S Series Digital CCD Color Camera

1/3-INCH, STANDARD RESOLUTION, 330 TVL (NTSC/PAL)

## Product Features

- 1/3-Inch Format CCD Imager
- Digital Signal Processing
- 330 TV Lines Resolution
- 0.6 Lux Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Broad Spectrum Automatic White Balance
- Phase Adjustable Line Lock
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **CC3710S Series** is a standard resolution digital color camera with 330 TV lines.

The **CC3710S Series** digital camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features broad spectrum automatic white balance, automatic gain control, electronic shutter control, digital signal processing, automatic backlight compensation, flickerless mode, and line lock with phase adjust. To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **CC3710S Series** digital camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **CC3710S Series**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall, ceiling, or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22917  
MANUAL: 229146

C2915 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



CAMERAS,  
COLOR, STANDARD RESOLUTION

## MODELS

CC3710S-6	1/3-inch standard resolution digital color CCD camera, 330 TVL, 24 VAC or 12 VDC, NTSC format
CC3710S-6X	Same as CC3710S-6 except PAL format
CC3710S-7	1/3-inch standard resolution digital color CCD camera, 330 TVL, 98-260 VAC, NTSC format
CC3710S-7X	Same as CC3710S-7 except PAL format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
NTSC	510 (H) x 492 (V)
PAL	500 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
NTSC	525 lines, 2:1 interlace
PAL	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	330 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
NTSC	1/60-1/100,000 second
PAL	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.6 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable $\pm 120^\circ$
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
Auto White Balance	On/off switchable
Signal Processing	Digital Signal Processing (DSP)
Video Output	1 Vp-p, 75 ohms
Auto White Balance Range	2,500° to 9,000°K
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
CC3710S-6, S-6X	20.4-27.6 VAC or 10.2-13.8 VDC
CC3710S-7, S-7X	98-260 VAC
Power Consumption	Less than 5 watts
Power Connector	
CC3710S-6, S-6X	2-pin terminal strip
CC3710S-7, S-7X	Integral power cable
Video Connector	BNC
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
----------------------	----------------

## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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## MCC1370H-2 Digital CCD Monochrome Camera

1/3-INCH, HIGH RESOLUTION, 560 TVL (EIA), COMPACT

### Product Features

- Compact Body Style
- 1/3-Inch Format CCD Imager
- CS Lens Mount (C-Mount Lenses Require Optional Adapter)
- 24 VAC Power with Line Lock
- AGC Function
- Backlight Compensation
- Analog Eclipser Function
- Horizontal Resolution of 560 TV Lines
- Digital Signal Processing
- For Use with DC-Controlled and Video Drive Auto Iris Lenses or Fixed/Manual Iris Lenses



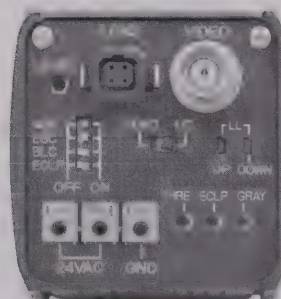
(LENS NOT SUPPLIED WITH CAMERA)

The **MCC1370H-2** is Pelco's smallest digital monochrome CCD imager. The compact camera's high resolution, 1/3-inch format CCD imager and high-density image sensor ensure a sharp and clear picture over a wide range of conditions.

The **MCC1370H-2's** extensive features create top quality picture output in various lighting environments. The camera adjusts automatically to light changes when the automatic gain control is used with a fixed or manual iris lens. The analog eclipser function allows the auto-iris lens to create clear images in a dark area with a strongly backlit background. Backlight compensation adjusts the picture to prevent objects from appearing extremely dark due to a strong backlight. The **MCC1370H-2** integrates other fine-tuning functions such as automatic sensitivity adjustment, real-time auto white balance, and auto iris lens output.

The **MCC1370H-2** has a standard CS lens mount and can be used with fixed, manual, or auto iris (DC or video drive controlled) lenses. The iris is controlled through a standard four-pin square connector that is included on all Pelco auto iris lenses.

The **MCC1370H-2** has a quick-connect power connection, BNC video connector, and a standard 1/4-inch UNC-20 screw for top or bottom mounting. The camera is quick and easy to install and is ideal for use with DF5, DF8A, EH100, EH3508, and EH2508 enclosures. The camera is also featured in Pelco's DomePak® and ImagePak® fixed camera dome/enclosure packages.



CAMERAS  
MONOCHROME, HIGH RESOLUTION



**DataFAX**  
**SPEC:** 21939  
**MANUAL:** 219616

C1939 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

MCC1370H-2

1/3-inch, high resolution digital monochrome  
CCD camera, 560 TVL, EIA format

## GENERAL

CCD Sensor	1/3-inch interline transfer
Picture Elements	380K
Sensing Area	3/16 x 1/8-inch (4.7 x 3.5 mm)
Synchronization System	AC line lock
Horizontal Resolution	560 TV lines
Iris Control	Electronic/passive
Minimum Illumination	0.1 lux, f1.2, 40 IRE, AGC on, 75% reflectance
ESC	300:1
Signal-to-Noise Ratio	>48 dB
Gain Control	Automatic
Vertical Phase	Adjustable $\pm 90^\circ$
Automatic Gain Control	Selectable
Backlight Compensation	Selectable
Scanning System	525 lines, 2:1 interlace
Signal Processing	DSP
Auto Iris Lens Type	DC/video control
Video Output	1Vp-p, 75 ohms

## ELECTRICAL

Power Requirements	24 VAC, 60 Hz
Power Consumption	3 watts
Power Connector	3-pin terminal strip, push-in type
Video Connector	BNC
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	CS mount
Camera Mount	1/4-inch UNC-20 screw, top and bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	-40° to 140°F (-40° to 60°C)
Humidity	20% to 80% (non-condensing)

## PHYSICAL

Weight (without lens)	0.40 lb (0.20 kg)
Shipping Weight	1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

BS1750/CM1750/  
CM1750S/TB1750

Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.

## RECOMMENDED POWER SUPPLIES

TF2000

MCS Series

WCS Series

Power supply for one 24 VAC camera, 20 VA  
Multiple 24 VAC camera power supply, indoor  
Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series

13VA, VD Series

13ZD, ZM Series

Fixed focal length lenses, 1/3-inch format.  
FA (manual iris); FD (auto iris, DD).  
Varifocal lenses, 1/3-inch format.  
VA (manual iris); VD (auto iris, DD).  
Motorized zoom lenses, 1/3-inch format.  
ZD (auto iris, DD); ZM (manual iris).

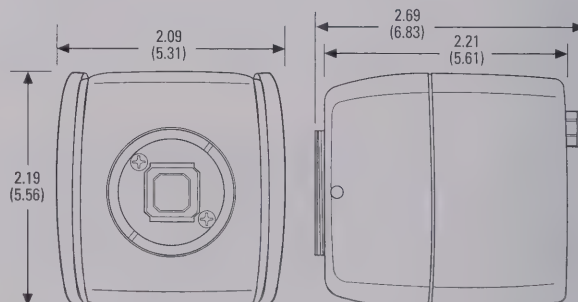
## LENS ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.

PCMA40

Lens adapter. Adapts standard C-mount lenses to CS-mount cameras.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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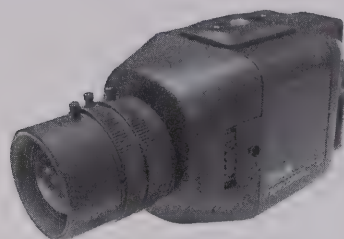


# MC3651H-2 Series Digital CCD Monochrome Camera

## LOWLIGHT™ DSS, 1/3-INCH, HIGH RESOLUTION, 570 TVL (EIA/CCIR)

### Product Features

- LowLight™ Technology
- Sony EXview HAD™ CCD Technology
- Compact Body Style, Shorter Overall Than Most Full-Featured CCD Cameras
- 1/3-Inch Format CCD Imager
- C/CS Lens Mount
- 24 VAC/12 VDC Power
- Line Lock With Phase Adjustment
- AGC Function
- Backlight Compensation
- Horizontal Resolution of 570 TV Lines
- For Use with Direct Drive and Auto Iris Lenses or Fixed/Manual Iris Lenses
- Removable Top/Bottom Mount
- Low Profile Mounting Block
- Optional Integral Feedthrough Mount



(REAR COVER REMOVED)



CAMERA MOUNTED ON  
PCM100 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

Designed and manufactured in the USA, the **MC3651H-2 Series** monochrome camera produces outstanding images in low light conditions. This phenomenal performance is attributed to Pelco engineers who designed the **MC3651H-2 Series** by combining EXview HAD™ CCD technology with extended digital slow shutter (DSS) settings.

Sony EXview HAD CCD technology enhances the low light performance of the camera, even when the DSS setting is off. When turned on, DSS intensifies the camera's sensitivity by increasing the fields of integration and slowing the picture frame rate. Available DSS settings are:

- Off to disable the DSS mode
- Four fields of integration maximum (1/15-second update rate)
- Fifteen fields of integration maximum (1/4-second update rate)
- Thirty fields of integration maximum (1/2-second update rate)

The **MC3651H-2 Series** has a horizontal resolution of 570 TV lines. Other features include electronic shutter control, phase adjustment, enhanced sharpness, long-line compensation, backlight compensation, and automatic gain control.

The **MC3651H-2 Series** also has a 1/3-inch imager, direct drive/auto iris lens connector, and adjustable back focus for C/CS lenses. Back focus adjustment is simple with the easy-to-grip thumb wheel, accessible from the top or bottom of the camera.

Smaller than most full-featured CCD cameras, the compact camera and lens fit perfectly inside one of Pelco's smaller enclosures (EH100, EH3500, EH2500, EH2020, and EH2100). Pelco has a wide selection of fixed and varifocal lenses available for the **MC3651H-2** to meet your installation requirements.

The **MC3651H-2 Series** camera is quick and easy to install, and its distinctive design is ideal for use in confined spaces. The camera has a quick-connect power connection, BNC video connector, and a removable mount adapter for top or bottom mounting.

Accessories include the PCM100 camera mount designed specifically for the **MC3651H-2 Series**. This adjustable mount has no exposed cabling or hardware. All cable is integrated in the unit making installation quick and easy. The PCM100 can be installed directly to a wall or ceiling, or it can be adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box.



DataFAX  
SPEC: 21985  
MANUAL: 219856

C1985 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



U.S. Patent D-460,773



## MODELS

MC3651H-2	1/3-inch high resolution digital monochrome CCD camera, 570 TVL, EIA format
MC3651H-2X	Same as MC3651H-2 except CCIR format

## GENERAL

Imaging Device	1/3-inch interline transfer EXview HAD™ CCD
Picture Elements	
MC3651H-2	768 (H) x 494 (V)
MC3651H-2X	795 (H) x 596 (V)
Sensing Area	
MC3651H-2	6 mm diagonal
MC3651H-2X	6.3 mm (H) x 4.7 mm (V)
Scanning System	
MC3651H-2	525 lines, 2:1 interlace
MC3651H-2X	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	570 TV lines
Iris Control	Electronic/passive
Minimum Illumination	0.07 lux, 1/60-second shutter speed or 0.003 1/2-second shutter speed, f1.2, 40 IRE, AGC on, 75% reflectance
Signal-to-Noise Ratio	50 dB
Vertical Phase	Adjustable 0° ±170°
Automatic Gain Control	Selectable by DIP switch setting
Backlight Compensation	Selectable by DIP switch setting
Signal Processing	DSP
Auto Iris Lens Type	DC/video control
Video Output	1 Vp-p, 75 ohms
Electronic Shutter	
Control Range	1/60-1/100,000 second

## ELECTRICAL

Power Requirements	18-30 VAC or 10-36 VDC
Power Consumption	Less than 3.3 watts
Power Connector	2-pin terminal strip, push-in type
Video Connector	BNC
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top and bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)

## PHYSICAL

Weight (without lens)	0.77 lb (0.35 kg)
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- Complies with Argentina compliance requirements under Res. 92/98.
- FCC, Class B
- U.S. Patent D-460,773

## RECOMMENDED MOUNTS

BS1750/CM1750/  
CM1750S/TB1750

Adjustable swivel head camera mounts for wall, ceiling, or pedestal mounting.

PCM100

Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box.

## RECOMMENDED POWER SUPPLIES

TF2000

Power supply for one 24 VAC camera, 20 VA

MCS Series

Multiple 24 VAC camera power supply, indoor

WCS Series

Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series

Fixed focal length lenses, 1/3-inch format. FA (manual iris); FD (auto iris, DD).

13VA, VD Series

Varifocal lenses, 1/3-inch format. VA (manual iris); VD (auto iris, DD).

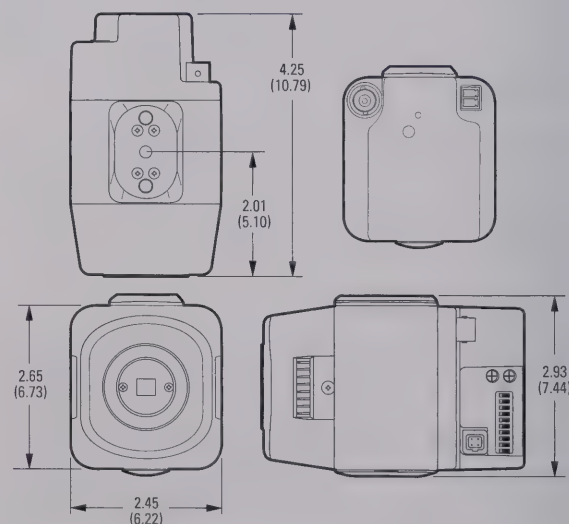
13ZD, ZM Series

Motorized zoom lenses, 1/3-inch format. ZD (auto iris, DD); ZM (manual iris).

## LENS ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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Indicates change or addition.

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## MC3710H Series CCD Monochrome Camera

1/3-INCH, HIGH RESOLUTION, 570 TVL (EIA/CCIR)

### Product Features

- 1/3-Inch Format CCD Imager
- 570 TV Lines Resolution
- 0.07 Lux Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Phase Adjustable Line Lock
- GenLock (external synchronization)
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **MC3710H Series** is a high resolution monochrome camera with 570 TV lines.

The **MC3710H Series** camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features automatic gain control, electronic shutter control, automatic backlight compensation, flickerless mode, line lock with phase adjust, and GenLock (for synchronizing a multiple camera installation). To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **MC3710H Series** camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **MC3710H Series**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall or ceiling or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22918  
MANUAL: 229136

C2918 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MC3710H-6	1/3-inch high resolution monochrome CCD camera, 570 TVL, 24 VAC or 12 VDC, EIA format
MC3710H-6X	Same as MC3710H-6 except CCIR format
MC3710H-7	1/3-inch high resolution monochrome CCD camera, 570 TVL, 98-260 VAC, EIA format
MC3710H-7X	Same as MC3710H-7 except CCIR format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
EIA	768 (H) x 494 (V)
CCIR	752 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
EIA	525 lines, 2:1 interlace
CCIR	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal, GenLock (external)
Horizontal Resolution	570 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
EIA	1/60-1/100,000 second
CCIR	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.07 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable $\pm 120^\circ$
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
GenLock-High Resolution	On/off switchable
Signal Processing	Digital Signal Processing (DSP)
Video Output	1 Vp-p, 75 ohms
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
MC3710H-6, H-6X	20.4-27.6 VAC or 10.2-13.8 VDC
MC3710H-7, H-7X	98-260 VAC
Power Consumption	Less than 4 watts
Power Connector	
MC3710H-6, H-6X	2-pin terminal strip
MC3710H-7, H-7X	Integral power cable
Video Connector	2 BNCs
	1-Video
	1-Video-GenLock high resolution only
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
----------------------	----------------

## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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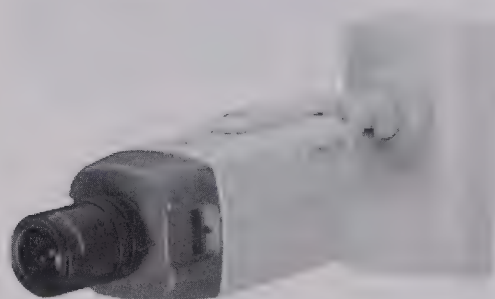
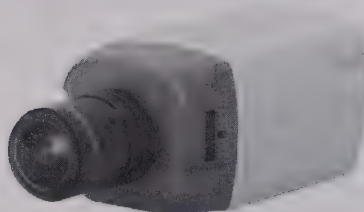


## MC3610H Series CCD Monochrome Camera

1/3-INCH, HIGH RESOLUTION, ENHANCED SENSITIVITY, 570 TVL (EIA/CCIR)

### Product Features

- Sony EXview HAD™ Technology
- 1/3-Inch Format CCD Imager
- 570 TV Lines Resolution
- 0.04 Lux Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Phase Adjustable Line Lock
- GenLock (external synchronization)
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **MC3610H Series** is a high resolution monochrome camera with Sony EXview HAD technology for enhanced light sensitivity at 0.04 lux.

The **MC3610H Series** camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features automatic gain control, electronic shutter control, automatic backlight compensation, flickerless mode, and line lock with phase adjust. To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **MC3610H Series** camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **MC3610H Series**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall or ceiling or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22913  
MANUAL: 229136

C2913 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MC3610H-6	1/3-inch high resolution monochrome CCD camera, 570 TVL, 24 VAC or 12 VDC, EIA format
MC3610H-6X	Same as MC3610H-6 except CCIR format
MC3610H-7	1/3-inch high resolution monochrome CCD camera, 570 TVL, 98-260 VAC, EIA format
MC3610H-7X	Same as MC3610H-7 except CCIR format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
EIA	768 (H) x 494 (V)
CCIR	752 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
EIA	525 lines, 2:1 interlace
CCIR	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	570 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
EIA	1/60-1/100,000 second
CCIR	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.04 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable $\pm 120^\circ$
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
GenLock-High Resolution	On/off switchable
Signal Processing	Analog
Video Output	1 Vp-p, 75 ohms
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
MC3610H-6, H-6X	20.4-27.6 VAC or 10.2-13.8 VDC
MC3610H-7, H-7X	98-260 VAC
Power Consumption	Less than 4 watts
Power Connector	
MC3610H-6, H-6X	2-pin terminal strip
MC3610H-7, H-7X	Integral power cable
Video Connector	2 BNCs
	1-Video
	1-Video-GenLock high resolution only
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
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## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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## MCC2400S-4 Series CCD Monochrome Camera

1/3-INCH, STANDARD RESOLUTION, 380 TVL (EIA/CCIR), COMPACT

### Product Features

- Compact Body Style
- 1/3-Inch Format CCD Imager
- 380 TV Lines Resolution
- CS Lens Mount (C-Mount Lenses Require Optional Adapter)
- Electronic Iris
- Automatic Gain Control (AGC)
- Backlight Compensation
- Internal Top/Bottom Mount
- 12 VDC Power
- Cost Effective



(LENS NOT SUPPLIED WITH CAMERA)

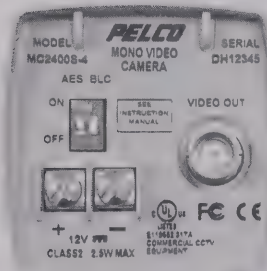
The **MCC2400S-4 Series** is one of Pelco's smallest and most economical cameras, providing true color reproduction and image quality at a great price. Its compact size makes it ideal for Pelco's DF5 and DF8 domes and EH100, EH2508, and EH3508 enclosures.

Cameras in the **MCC2400S-4 Series** use a 1/3-inch format CCD imager and have standard resolution of 380 TV lines. They operate on 12 VDC power.

The cameras feature automatic gain control, an electronic iris, and backlight compensation.

The cameras are easy to install. Connect power and video, and set on/off switches for electronic iris and backlight compensation. Install a lens and adjust the back focus. Camera mounts on the top and bottom of the housing provide flexibility for mounting.

The **MCC2400S-4 Series** has a standard CS lens mount, but with the optional PMCA40 lens adapter, C-mount lenses can be installed. A wide variety of fixed, varifocal, and zoom lenses can be used with either manual or auto iris. Auto iris lenses must be DC drive only. The iris is controlled through a standard four-pin square connector that is included on all Pelco auto iris lenses.



MCC2400S-4 REAR VIEW

CAMERAS  
MONOCHROME, STANDARD RES



**DataFAX**  
**SPEC:** 21998  
**MANUAL:** 219896

C1998 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

MCC2400S-4	1/3-inch standard resolution monochrome CCD camera, 380 TV lines, EIA format
MCC2400S-4X	Same as MCC2400S-4 except CCIR format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	510 (H) x 492 (V) 500 (H) x 582 (V)
Scanning System	525 lines, 2:1 interlace 625 lines, 2:1 interlace
Synchronization	Internal
Horizontal Resolution	380 TV lines
Iris Control	Selectable by DIP switch setting
Electronic Shutter Range	1/60-1/100,000 second 1/50-1/100,000 second
Auto Iris Lens Type	DC control
Minimum Illumination	0.1 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal-to-Noise Ratio	>48 dB
Automatic Gain Control	Permanently on
Backlight Compensation	Selectable by DIP switch setting
Signal Processing	Analog
Video Output	1 Vp-p, 75 ohms

## ELECTRICAL

Power Requirements	10.2-13.8 VDC
Power Consumption	Less than 2 watts
Power Connector	Screw terminals
Video Connector	BNC
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	CS mount
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Storage Temperature	14° to 158°F (-10° to 70°C)
Humidity	20% to 80%, non-condensing

## PHYSICAL

Weight (without lens)	0.32 lb (0.147 kg)
Shipping Weight	1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

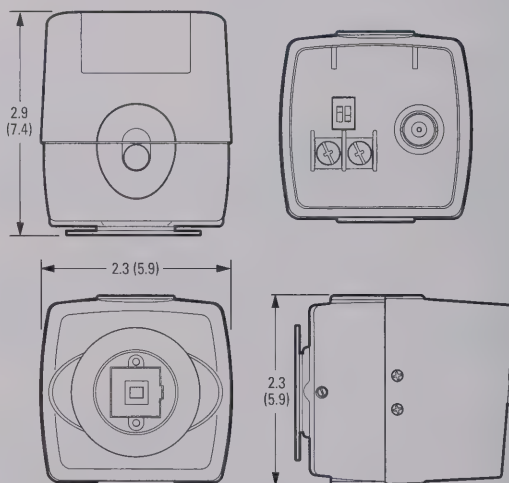
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mount for wall, ceiling, or pedestal mounting
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## RECOMMENDED LENSES

13FA, FD Series	Fixed focal lenses, 1/3-inch format. FA (manual iris); FD (auto iris, DD).
13VA, VD Series	Varifocal lenses, 1/3-inch format. VA (manual iris); VD (auto iris, DD).
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format. ZM (manual iris); ZD (auto iris, DD).

## LENS ACCESSORIES

PCMA40	Lens adapter. Adapts standard C-mount lenses to CS-mount cameras.
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NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**NOTE:** For outdoor camera installations, a Pelco enclosure is recommended.



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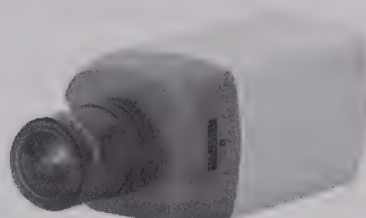


## MC3710S Series CCD Monochrome Camera

1/3-INCH, STANDARD RESOLUTION, 380 TVL (EIA/CCIR)

### Product Features

- 1/3-Inch Format CCD Imager
- 380 TV Lines Resolution
- 0.06 Lux Sensitivity
- UTP Output Standard
- Setup Service Connector
- C/CS Lens Mount
- Autosensing DC/Video Auto Iris Drive
- Electronic Shutter Control (ESC)
- Automatic Gain Control (AGC)
- Phase Adjustable Line Lock
- Backlight Compensation
- Internal Top/Bottom Mount
- Low-Voltage and High-Voltage Models
- Optional Integral Feedthrough Mount



CAMERA MOUNTED ON  
PCM150 CAMERA MOUNT

(LENS AND MOUNT NOT SUPPLIED WITH CAMERA)

The **MC3710S Series** is a standard resolution monochrome camera with 380 TV lines.

The **MC3710S Series** camera is quick and easy to install. The camera has a quick connect power connection, UTP output (through an RJ-45 connector), BNC video connector, service connector (handy for attaching a local video test monitor during camera setup) and internal mount for either top or bottom mounting.

The camera features automatic gain control, electronic shutter control, automatic backlight compensation, flickerless mode, and line lock with phase adjust. To adjust one of the camera's fine-tuning features, just use the corresponding DIP switch on the back panel of the camera.

The **MC3710S Series** camera also includes a 1/3-inch imager, accepts (and autosenses) DC and video drive auto iris lenses, and has adjustable back focus to accommodate C or CS lenses. Back focus adjustment is easy with the lockable thumb wheel, accessible from the top or bottom of the camera. This camera is available in both high voltage and low-voltage models.

Accessories include the PCM150, a Pelco camera mount designed specifically for the **MC3710S Series**. This adjustable, well-designed mount has no exposed cabling or hardware. All cable is integrated in the unit, making installation quick and easy. The PCM150 can be installed directly to a wall, ceiling, or adapted to most standard electrical boxes worldwide.



DataFAX  
SPEC: 22919  
MANUAL: 229136

C2919 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MC3710S-6	1/3 inch standard resolution monochrome CCD camera, 380 TVL, 24 VAC or 12 VDC, EIA format
MC3710S-6X	Same as MC3710S-6 except CCIR format
MC3710S-7	1/3 inch standard resolution monochrome CCD camera, 380 TVL, 98-260 VAC, EIA format
MC3710S-7X	Same as MC3710S-7 except CCIR format

## GENERAL

Imaging Device	1/3-inch interline transfer CCD
Picture Elements	
EIA	510 (H) x 492 (V)
CCIR	500 (H) x 582 (V)
Sensing Area	6 mm diagonal
Scanning System	
EIA	525 lines, 2:1 interlace
CCIR	625 lines, 2:1 interlace
Synchronization System	AC line lock/internal
Horizontal Resolution	380 TV lines
Iris Control	Selectable on/off
Electronic Shutter Range	
EIA	1/60-1/100,000 second
CCIR	1/50-1/100,000 second
Auto Iris Lens Type	DC/video drive (AutoSense)
Minimum Illumination	0.06 lux, f1.2, 40 IRE, AGC on, 75% reflectance
Signal to Noise Ratio	>50 dB
Vertical Phase	Adjustable $\pm 120^\circ$
Automatic Gain Control	On/off switchable
Electronic Shutter Control	On/off switchable
Backlight Compensation	On/off switchable
Flickerless Mode	On/off switchable
Internal Sync	On/off switchable
Signal Processing	Analog
Video Output	1 Vp-p, 75 ohms
Gamma Correction	0.45

## ELECTRICAL

Power Requirements	
MC3710S-6, S-6X	20.4-27.6 VAC or 10.2-13.8 VDC
MC3710S-7, S-7X	98-260 VAC
Power Consumption	Less than 4 watts
Power Connector	
MC3710S-6, S-6X	2-pin terminal strip
MC3710S-7, S-7X	Integral power cable
Video Connector	BNC
UTP Connector	RJ-45
Lens Jack	4-pin connector (miniature square)

## MECHANICAL

Lens Mount	C/CS mount (adjustable)
Camera Mount	1/4-inch UNC-20 screw, top or bottom of camera housing

## ENVIRONMENTAL

Operating Temperature	14° to 122°F (-10° to +50°C)
Storage Temperature	14° to 158°F (-10° to +70°C)
Operating Humidity	20% to 80%, non-condensing
Storage Humidity	20% to 90%, non-condensing

## PHYSICAL

Dimensions	4.8" L x 2.9" W x 2.6" H (12.3 x 7.2 x 6.7 cm)
Weight (without lens)	0.8 lb (0.4 kg) approximate
Shipping Weight	2 lb (0.9 kg) approximate

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## ACCESSORIES

Supplied Accessories	Lens mount cap
----------------------	----------------

## RECOMMENDED MOUNTS

PCM150-6	Adjustable camera mount for wall or ceiling application. Includes integrated cable for easy plug and play operation. Can also be adapted to most standard electrical boxes worldwide. 12 VDC/24 VAC input.
PCM150-7	Same as PCM150-6 except 98-260 VAC input.
BS1750/CM1750/ CM1750S/TB1750	Adjustable swivel head camera mounts for wall, ceiling or pedestal mounting.
CM1450	Adjustable swivel head camera mount for wall mounting.
CM4400/EM4400	Adjustable swivel head or tilt-table camera mounts for wall or ceiling mounting.

## RECOMMENDED POWER SUPPLIES

TF2000	Power supply for one 24 VAC camera, 20 VA
MCS Series	Multiple 24 VAC camera power supply, indoor
WCS Series	Single/multiple 24 VAC camera power supply, outdoor

## RECOMMENDED LENSES

13FA, FD Series	Fixed focal length lenses, 1/3-inch format: FA (manual iris), FD (auto iris, DD)
13VA, VD Series	Varifocal lenses, 1/3-inch format: VA (manual iris), VD (auto iris, DD)
13ZM, ZD Series	Motorized zoom lenses, 1/3-inch format: ZM (manual iris), ZD (auto iris, DD)



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## LENSES

### Extensive Selection – Fixed, Varifocal, and Zoom Lenses

#### Fixed Lenses

Pelco's fixed focal length lenses are available with choice of iris function (manual or auto iris) and focal length (2.3 mm to 25 mm). Fixed lenses have a predetermined focal length and manual focus control.

#### Varifocal Lenses

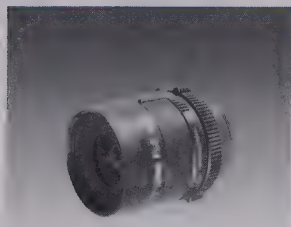
Pelco offers the largest selection of varifocal lenses in the surveillance industry. Lenses are available with adjustable zoom for a large range of focal lengths. Unlike a zoom lens, a varifocal lens does not maintain focus when zoomed. The lens at installation is set for optimum field of view.

#### Motorized Zoom Lenses

Pelco zoom lenses are available with either manual or auto iris lens function. A motorized zoom lens keeps the viewed object in focus while varying the length of the lens.

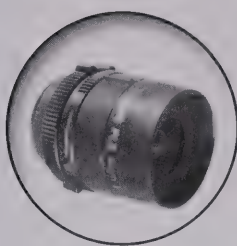
Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Lens Selection Guide, 1/3-inch Format

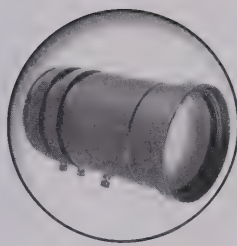


# Lens Selection Guide, 1/3-Inch Format

## Lens Format



Fixed



Varifocal



Zoom

Focal Length	Iris Type*	Special Feature	Model Number	See Page
2.3mm Very Wide	Adjustable		13FA2.3	125
	Auto Iris		13FD2.3	129
2.8mm Wide	Adjustable		13FA2.8	125
	Auto Iris		13FD2.8	129
4.0mm Normal	Adjustable		13FA4	125
	Auto Iris		13FD4	129
8.0mm Telephoto	Adjustable		13FA8	125
	Auto Iris		13FD8	129
1.6-3.4mm Ultra wide-Wide	Adjustable		13VA1-3	131
	Auto Iris		13VD1-3	133
2.5-6mm Extremely wide-Wide	Adjustable		13VA2.5-6	131
	Auto Iris		13VD2.5-6	133
2.8-12mm Extremely wide-Wide	Adjustable		13VA2.8-12	131
	Auto Iris		13VD2.8-12	133
3-8mm Wide-Telephoto	Adjustable		13VA3-8	131
	Auto Iris		13VD3-8	133
5-40mm Normal-Medium Telephoto	Adjustable		13VA5-40	131
	Auto Iris		13VD5-40	133
5-50mm Normal-Medium Telephoto	Adjustable		13VA5-50	131
	Auto Iris		13VD5-50	133
5.5-82.5mm Normal-Long Telephoto	Adjustable		13VA5.5-82.5	131
	Auto Iris		13VD5.5-82.5	133
6-36mm (6x)	Auto Iris	Preset Positioning?	No 13ZD6X6	143
			Preset 13ZD6X6P	143
6-48mm (8x)	Motorized		13ZM6X8	139
	Auto Iris	Preset Positioning?	No 13ZD6X8	143
			Preset 13ZD6X8P	143
6-60mm (10x)	Motorized		13ZM6X10	139
	Auto Iris	Preset Positioning?	No 13ZD6X10	143
			Preset 13ZD6X10P	143
6-90mm (15x)	Motorized		13ZM6X15	139
	Auto Iris	Preset Positioning?	No 13ZD6X15	143
			Preset 13ZD6X15P	143
6.5-112mm (20x)	Auto Iris	Preset Positioning?	No 13ZD5.6X20	143
			Preset 13ZD5.6X20P	143
5.5-165mm (30x)	Auto Iris	Preset Positioning?	No 13ZD5.5X30	143
			Preset 13ZD5.5X30P	143
11-200mm (18x)	Auto Iris	Preset Positioning?	No 12ZV11X18	145
			Preset 12ZV11X18P	145

\*For video drive lenses use DC-drive part number and use LDC100 DC-to-video drive converter.

# 13FA Series Fixed Focal Lens

## 1/3-INCH FORMAT, MANUAL IRIS

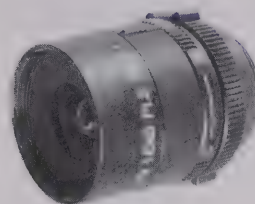
### Product Features

- CS Mount
- For use with 1/3-Inch Format Cameras
- Manual Iris, Manual Focus
- High Resolution Power in Compact Body

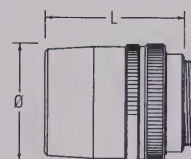
Pelco's **13FA Series** offers a compact, economical, high-quality selection of 1/3-inch manual iris, fixed focal length lenses. All **13FA Series** lenses have a CS mount. Pelco's 1/3-inch CCTV cameras having an electronic iris function are a perfect match for these lenses.

The lenses range from a 2.3 mm lens with an extra-wide field of view to an 8 mm lens with a normal view. For low light conditions the 2.3 and 2.8 mm lenses open to f1.4, and the 4 and 8 mm lenses open to f1.2.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



13FA4



	Ø		L	
13FA2.3	1.40	(3.56)	1.62	(4.11)
13FA2.8	1.40	(3.56)	1.50	(3.81)
13FA4	1.40	(3.56)	1.64	(4.17)
13FA8	1.40	(3.56)	1.39	(3.53)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

LENSES  
FIXED FOCAL, MANUAL IRIS



DataFAX  
SPEC: 2783  
MANUAL: 27476

C783 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

	<b>13FA2.3</b>	<b>13FA2.8</b>	<b>13FA4</b>	<b>13FA8</b>
Type	Fixed Focal Length	Fixed Focal Length	Fixed Focal Length	Fixed Focal Length
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS	CS
Focal Length	2.3 mm	2.8 mm	4 mm	8 mm
Relative Aperture (F)	1.4~Close	1.4~Close	1.2~Close	1.2~Close
Operation				
Iris	Manual	Manual	Manual	Manual
Focus	Manual	Manual	Manual	Manual
Zoom	—	—	—	—
Angle of View				
Diagonal	143.2°	121.8°	92.3°	43.8°
Horizontal	116.1°	97.4°	71.6°	34.5°
Vertical	87.4°	72.8°	52.7°	25.6°
Minimum Object Distance	0.2 m	0.2 m	0.2 m	0.2 m
Back Focal Length	8.30 mm	8.80 mm	9.17 mm	9.21 mm
Filter Size (mm)	30.5P0.5	30.5P0.5	30.5P0.5	30.5P0.5
Unit Weight	0.08 lb (0.04 kg)	0.08 lb (0.04 kg)	0.08 lb (0.04 kg)	0.13 lb (0.06 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)

LENSES  
FIXED FOCAL, MANUAL IRIS



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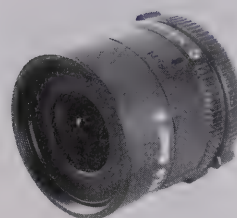


# 12FA Series Fixed Focal Lens

## 1/2-INCH FORMAT, MANUAL IRIS

### Product Features

- C Mount
- For use with 1/2-Inch Format Cameras
- Manual Iris, Manual Focus
- Can Be Adapted for Use on CS-Mount Cameras with Optional C-to-CS Mount Adapter
- High Resolution Power in Compact Body

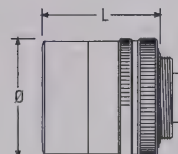


12FA6C

Pelco's **12FA Series** offers a compact, economical, high-quality selection of manual iris, fixed focal length lenses. All **12FA Series** lenses have a C mount. The optional PCMA40 CS-mount adapter can be used to fit the C-mount lenses to CS-mount cameras. Pelco's 1/2- and 1/3-inch CCTV cameras having an electronic iris function are a perfect match for these lenses.

The lenses range from a 3.5 mm lens with an extra-wide field of view to a 12 mm lens with a normal view (when used on a 1/2-inch camera). They utilize a manual iris that adjusts from f1.4 to fully closed with an iris opening of f1.4. The lenses are ideal for low-light conditions.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



	Ø		L	
12FA3.5C	1.40	(3.56)	1.22	(3.10)
12FA4.5C	1.40	(3.56)	1.26	(3.20)
12FA6C	1.40	(3.56)	1.37	(3.48)
12FA12C	1.40	(3.56)	1.19	(3.02)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2782  
MANUAL: 27476

C782 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

	<b>12FA3.5C</b>	<b>12FA4.5C</b>	<b>12FA6C</b>	<b>12FA12C</b>
Type	Fixed Focal Length	Fixed Focal Length	Fixed Focal Length	Fixed Focal Length
Format Size	1/2-inch	1/2-inch	1/2-inch	1/2-inch
Mount Type	C	C	C	C
Focal Length	3.5 mm	4.5 mm	6 mm	12 mm
Relative Aperture (F)	1.4~Close	1.4~Close	1.4~Close	1.4~Close
Operation				
Iris	Manual	Manual	Manual	Manual
Focus	Manual	Manual	Manual	Manual
Zoom	—	—	—	—
Angle of View				
Diagonal	132.1°	98.2°	69.4°	37.5°
Horizontal	103.6°	79.0°	57.3°	30.3°
Vertical	76.6°	59.4°	44.0°	22.6°
Minimum Object Distance	0.2 m	0.2 m	0.2 m	0.3 m
Back Focal Length	8.55 mm	7.56 mm	8.06 mm	8.06 mm
Filter Size (mm)	30.5P0.5	30.5P0.5	30.5P0.5	30.5P0.5
Unit Weight	0.13 (0.06 kg)	0.13 (0.06 kg)	0.13 (0.06 kg)	0.13 (0.06 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)

## OPTIONAL ACCESSORIES

PCMA40	Universal 5 mm ring adapter; adapts C-mount lens to CS-mount camera
--------	---



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# 13FD Series Fixed Focal Lens

## 1/3-INCH FORMAT, AUTO IRIS (DIRECT DRIVE)

### Product Features

- CS Mount
- Spot Filter
- For use with 1/3-Inch Format Cameras
- Auto Iris (Direct Drive, No Amplifier), Manual Focus
- High Resolution Power in Compact Body

Pelco's **13FD Series** offers a compact, economical, high-quality selection of DC-Drive auto-iris, fixed focal length lenses. All **13FD Series** lenses have a CS mount.

All 1/3-inch CCTV cameras requiring DC-drive auto-iris lenses can be fitted with lenses in this series. Lenses in the **13FD Series** come with a standard square 4-pin plug installed for ease of installation and convenience. In addition, all auto-iris lenses include a spot filter.

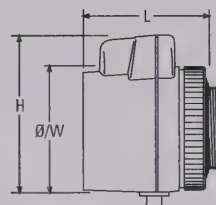
Lenses in this series are available in various fixed focal lengths ranging from a 2.3 mm lens with an extra-wide field of view to an 8 mm lens with a normal view.

The **13FD Series** lenses use a galvanometric DC-drive automatic iris that adjusts from 1.2 to f360, depending upon the lens selected. These products are ideal for situations where relative light levels change and the camera and lens are required to compensate automatically for these changes.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



13FD4



	H	W/Ø	L
13FD2.3	1.92 (4.88)	1.55 (3.94)	1.63 (4.14)
13FD2.8	1.92 (4.88)	1.55 (3.94)	1.54 (3.91)
13FD4	1.92 (4.88)	1.55 (3.94)	1.57 (3.99)
13FD8	1.92 (4.88)	1.55 (3.94)	1.54 (3.91)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

LENSES,  
FIXED FOCAL, AUTO IRIS



DataFAX  
SPEC: 2736  
MANUAL: 27476

C736 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

	<b>13FD2.3</b>	<b>13FD2.8</b>	<b>13FD4</b>	<b>13FD8</b>
Type	Fixed Focal Length	Fixed Focal Length	Fixed Focal Length	Fixed Focal Length
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS	CS
Focal Length	2.3 mm	2.8 mm	4 mm	8 mm
Relative Aperture (F)	1.4-360	1.4-360	1.2-360	1.2-360
Operation				
Iris	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)
Focus	Manual	Manual	Manual	Manual
Zoom	—	—	—	—
Angle of View				
Diagonal	143.2°	121.8°	92.3°	43.8°
Horizontal	116.1°	97.4°	71.6°	34.5°
Vertical	87.4°	72.8°	52.7°	25.6°
Minimum Object Distance	0.2 m	0.2 m	0.2 m	0.2 m
Back Focal Length	8.30 mm	8.80 mm	9.17 mm	9.21 mm
Filter Size (mm)	37.5P0.5	37.5P0.5	37.5P0.5	37.5P0.5
Unit Weight	0.17 lb (0.08 kg)	0.17 lb (0.08 kg)	0.17 lb (0.08 kg)	0.13 lb (0.06 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B (all models)

## OPTIONAL ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.



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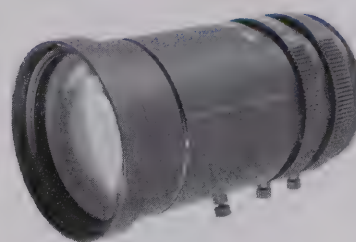


# 13VA Series Varifocal Lens

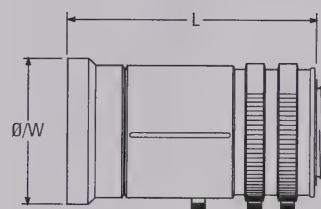
## 1/3-INCH FORMAT, MANUAL IRIS

### Product Features

- CS Mount
- For use with 1/3-Inch Format Cameras
- Manual Iris, Manual Focus, and Manual Zoom
- High Resolution Power in Compact Body



13VA5-40



	Ø/W	L
13VA1-3	1.56 (3.96)	2.05 (5.21)
13VA2.5-6	1.56 (3.96)	1.84 (4.67)
13VA2.8-12	1.58 (4.01)	2.33 (5.92)
13VA3-8	1.51 (3.83)	2.13 (5.41)
13VA5-40	1.65 (4.19)	2.86 (7.26)
13VA5-50	1.56 (3.96)	2.33 (5.92)
13VA5.5-82.5	1.89 (4.80)	3.25 (8.26)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

Pelco's **13VA Series** 1/3-inch varifocal lenses offer versatile and flexible packages in one lens. Each adjustable manual iris lens in this series covers a specific range of focal lengths. Adjust these lenses to get the exact field of view instead of "almost-the-right-view."

Appropriate for indoor and outdoor lighting situations, the **13VA Series** lenses will fit all 1/3-inch CS-mount cameras and are ideal for those equipped with an electronic iris feature. Some lenses have aspheric elements, which provide optimized, crisper images at all focal lengths.

Lenses in this series are available in 2.1X, 2.4X, 2.7X, 4.3X, 8X, 10X and 15X zoom with varying focal lengths.

Pelco's VA series varifocal lenses are optimized for maximum light transmission. Maximum apertures range from f1.4 to f1.8 for excellent low light characteristics.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.

LENSES,  
VARIFOCAL, MANUAL IRIS



DataFAX  
SPEC: 2754  
MANUAL: 27486

C754 / REVISED 2-03

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

	<b>13VA1-3</b>	<b>13VA2.5-6</b>	<b>13VA2.8-12</b>	<b>13VA3-8</b>
Type	Varifocal	Varifocal	Varifocal	Varifocal
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS	CS
Focal Length	1.6~3.4 mm	2.5~6 mm	2.8~12 mm	3~8 mm
Zoom Ratio	2.1X	2.4X	4.3X	2.7X
Relative Aperture (F)	1.4~Close	1.4~Close	1.4~Close	1.0~Close
Operation				
Iris	Manual	Manual	Manual	Manual
Focus	Manual	Manual	Manual	Manual
Zoom	Manual	Manual	Manual	Manual
Angle of View				
Diagonal	106.1°~180.0°	56.8°~133.3°	—	44.9°~117.9°
Horizontal	84.3°~180.0°	45.6°~107.6°	24.1°~97.4°	35.9°~91.0°
Vertical	55.8°~114.1°	34.2°~80.9°	18.1°~72.5°	26.9°~66.6°
Minimum Object Distance	Close	0.2 m	0.3 m	0.2 m
Back Focal Length	7.07~11.55 mm	8.72~14.24 mm	8.6 mm	8.36~14.12 mm
Filter Size (mm)	N/A	Consult factory	N/A	NIL
Unit Weight	0.20 lb (0.09 kg)	0.20 lb (0.09 kg)	0.15 lb (0.06 kg)	0.09 lb (0.04 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)

	<b>13VA5-40</b>	<b>13VA5-50</b>	<b>13VA5.5-82.5</b>
Type	Varifocal	Varifocal	Varifocal
Format Size	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS
Focal Length	5~40 mm	5~50 mm	5.5~82.5 mm
Zoom Ratio	8X	10X	15X
Relative Aperture (F)	1.6~Close	1.4~Close	1.8~Close
Operation			
Iris	Manual	Manual	Manual
Focus	Manual	Manual	Manual
Zoom	Manual	Manual	Manual
Angle of View			
Diagonal	8.8°~66.9°	—	4.2°~64.7°
Horizontal	6.5°~53.6°	5.3°~53.4°	3.1°~50.7°
Vertical	4.8°~40.2°	4.1°~40.1°	2.3°~37.5°
Minimum Object Distance	0.5 m	0.5 m	0.2 m
Back Focal Length	10~14.3 mm	10.05 mm	8.65~10.32 mm
Filter Size (mm)	40.5P0.5	N/A	46P0.75
Unit Weight	0.30 lb (0.14 kg)	0.20 lb (0.09 kg)	0.48 lb (0.22 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)

LENSES  
VARIFOCAL, MANUAL IRIS



### Pelco Worldwide Headquarters:

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## 13VD Series Varifocal Lens

### 1/3-INCH FORMAT, AUTO IRIS (DIRECT DRIVE)

#### Product Features

- CS Mount
- Spot Filter
- For use with 1/3-Inch Format Cameras
- Auto Iris, Manual Focus and Zoom
- High Resolution Power in Compact Body



13VD5-40

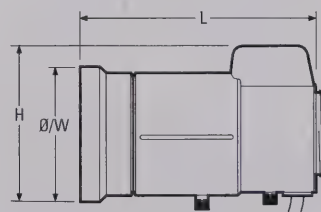
Pelco's **13VD Series** 1/3-inch varifocal lenses offer versatile and flexible packages in one basic lens. Each auto-iris lens in this series covers a specific range of focal lengths. Adjust these lenses to get the exact field of view instead of "almost-the-right-view."

Appropriate for indoor and outdoor lighting situations, the **13VD Series** lenses will fit all 1/3-inch CS-mount cameras requiring DC-drive auto-iris lenses. In addition, all auto-iris lenses include a spot filter. Lenses in the **13VD Series** come with a standard square 4-pin plug installed for ease of installation and convenience.

Lenses in this series are available in 2.1X, 2.4X, 2.7X, 4.3X, 8X, 10X and 15X zoom with varying focal lengths.

Pelco's VD series lenses are intraspot-type lenses, which optimize the dynamic range of the iris. Maximum apertures of no less than f1.8 to a minimum aperture of f360 are typical of all these lenses. This allows for excellent performance characteristics across a wide range of lighting conditions.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



	H	Ø/W	L
13VD1-3	1.80 (4.57)	1.56 (3.96)	2.05 (5.21)
13VD2.5-6	1.80 (4.57)	1.55 (3.94)	1.85 (4.70)
13VD2.8-12	1.83 (4.65)	1.58 (4.01)	2.33 (5.92)
13VD3-8	1.74 (4.42)	1.44 (3.66)	2.13 (5.41)
13VD5-40	1.95 (4.95)	1.66 (4.22)	2.85 (7.24)
13VD5-50	2.13 (5.41)	1.63 (4.14)	2.33 (5.92)
13VD5.5-82.5	2.15 (5.46)	1.89 (4.80)	3.23 (8.20)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2758  
MANUAL: 27486

C758 / REVISED 4-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

	<b>13VD1-3</b>	<b>13VD2.5-6</b>	<b>13VD2.8-12</b>	<b>13VD3-8</b>
Type	Varifocal	Varifocal	Varifocal	Varifocal
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS	CS
Focal Length	1.6~3.4 mm	2.5~6 mm	2.8~12 mm	3~8 mm
Zoom Ratio	2.1X	2.4X	4.3X	2.7X
Relative Aperture (F)	1.4~360	1.4~125	1.4~360	1.0~360
Operation				
Iris	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)
Focus	Manual	Manual	Manual	Manual
Zoom	Manual	Manual	Manual	Manual
Angle of View				
Diagonal	106.1°~180.0°	56.8°~133.3°	—	44.9°~117.9°
Horizontal	84.3°~180.0°	45.6°~107.6°	24.1°~97.4°	35.9°~91.0°
Vertical	55.8°~114.1°	34.2°~80.9°	18.1°~72.5°	26.9°~66.6°
Minimum Object Distance	Close	0.2 m	0.3 m	0.2 m
Back Focal Length	7.06~11.54 mm	8.72~14.24 mm	8.6 mm	8.36~14.12 mm
Filter Size (mm)	N/A	N/A	N/A	N/A
Unit Weight	0.23 lb (0.11 kg)	0.20 (0.09 kg)	0.17 lb (0.08 kg)	0.09 lb (0.04 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)
	<b>13VD5-40</b>	<b>13VD5-50</b>	<b>13VD5.5-82.5</b>	
Type	Varifocal	Varifocal	Varifocal	
Format Size	1/3-inch	1/3-inch	1/3-inch	
Mount Type	CS	CS	CS	
Focal Length	5~40 mm	5~50 mm	5.5~82.5 mm	
Zoom Ratio	8X	10X	15X	
Relative Aperture (F)	1.6~360	1.4~185	1.8~360	
Operation				
Iris	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)	
Focus	Manual	Manual	Manual	
Zoom	Manual	Manual	Manual	
Angle of View				
Diagonal	8.8°~66.9°	—	4.2°~64.7°	
Horizontal	6.5°~53.6°	5.3°~53.4°	3.1°~50.7°	
Vertical	4.8°~40.2°	4.1°~40.1°	2.3°~37.5°	
Minimum Object Distance	Consult factory	0.5 m	0.2 m	
Back Focal Length	10~14.3 mm	10.05 mm	8.65~10.32 mm	
Filter Size (mm)	40.5P0.5	N/A	46P0.75	
Unit Weight	0.30 lb (0.14 kg)	0.25 lb (0.11 kg)	0.44 lb (0.20 kg)	
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)	1 lb (0.45 kg)	

## CERTIFICATIONS

- CE, Class B (all models)

## OPTIONAL ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.



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# 12VA Series Varifocal Lens

## 1/2-INCH FORMAT, MANUAL IRIS

### Product Features

- CS- or C-Mount Models Available
- For use with 1/2-Inch Format Cameras
- Manual Iris, Focus, and Zoom
- C-Mount Lenses can be Adapter for use on CS-Mount Cameras with Optional CS-Mount Adapter
- High Resolution Power in Compact Body



12VA4-10

Pelco's **12VA Series** of 1/2-inch varifocal lenses offers adjustable lenses that cover a range of applications from wide angle to telephoto. Each manual iris lens in this series covers a specific range of focal lengths. Adjust these lenses to get the exact field of view instead of "almost-the-right-view."

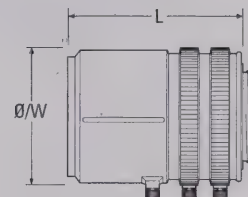
The lenses have either a C or CS mount. The optional PCMA40 CS-mount adapter can be used to fit the C-mount lenses to CS-mount cameras.

Appropriate for indoor and outdoor lighting situations, the **12VA Series** lenses will fit all 1/2- or 1/3-inch cameras and are ideal for those equipped with an electronic iris feature. Some lenses have aspheric elements, which provide optimized, crisper images at all focal lengths.

Lenses in this series are available in 2.2X and 2.5X zoom with varying focal lengths.

Pelco's **12VA Series** of varifocal lenses are optimized for maximum light transmission. The maximum aperture of f1.8 provides excellent low light characteristics.

See the Technical Specifications section of this product specification sheet and select the model lens that best suits your needs.



	Ø/W		L	
12VA4-10	1.51	(3.84)	1.98	(5.03)
12VA6-13	1.65	(4.19)	1.91	(4.85)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

LENSES,  
VARIFOCAL, MANUAL IRIS



DataFAX  
SPEC: 2752  
MANUAL: 27486

C752 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

	<b>12VA4-10</b>	<b>12VA6-13</b>
Type	Varifocal	Varifocal
Format Size	1/2-inch	1/2-inch
Mount Type	CS	C
Focal Length	4~10 mm	6~13 mm
Zoom Ratio	2.5X	2.2X
Relative Aperture (F)	1.8~Close	1.8~Close
Operation		
Iris	Manual	Manual
Focus	Manual	Manual
Zoom	Manual	Manual
Angle of View		
Diagonal	46.5°~122.3°	35.5°~75.5°
Horizontal	37.3°~94.8°	28.5°~60.3°
Vertical	28°~69°	21.4°~45.2°
Minimum Object Distance	0.3 m	0.3 m
Back Focal Length	8.27~13.90 mm	8.7 mm
Filter Size (mm)	N/A	N/A
Unit Weight	0.19 lb (0.09 kg)	0.20 lb (0.09 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)



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## 12VD Series Varifocal Lens

### 1/2-INCH FORMAT, AUTO IRIS (DIRECT DRIVE)

#### Product Features

- CS- or C-Mount Models Available
- Spot Filter
- For use with 1/2-Inch Format Cameras
- Auto Iris, Manual Focus and Zoom
- C-Mount Lenses Can Be Adapted for Use on CS-Mount Cameras with Optional CS-Mount Adapter
- High Resolution Power in Compact Body

Pelco's **12VD Series** of 1/2-inch varifocal lenses offer adjustable lenses that cover a range of applications from wide angle to telephoto. Each auto-iris lens in this series covers a specific range of focal lengths. Adjust these lenses to get the exact field of view instead of "almost-the-right-view."

The **12VD Series** lenses will fit 1/2- or 1/3-inch cameras requiring DC-drive auto-iris lenses. The lenses have either a C or CS mount. The optional PCMA40 CS-mount adapter can be used to fit the C-mount lenses to CS-mount cameras.

All auto-iris lenses include a spot filter and are appropriate for indoor and outdoor lighting situations. Lenses in the **12VD Series** come with a standard square 4-pin plug installed for ease of installation and convenience.

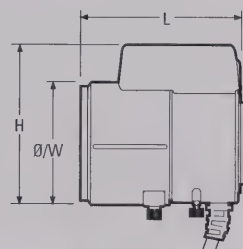
Lenses in this series are available in 2.2X and 2.5X zoom with varying focal lengths.

Pelco's **12VD Series** lenses are intraspot-type lenses, which optimize the dynamic range of the iris. Maximum aperture of f1.8 and a minimum aperture of f360 allow excellent performance characteristics across a wide range of lighting conditions.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



12VD4-10



	H	Ø/W	L
12VD4-10	1.75 (4.45)	1.40 (3.56)	1.97 (5.00)
12VD6-13	1.80 (4.57)	1.55 (3.93)	1.91 (4.85)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2757  
MANUAL: 27486

C757 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

	<b>12VD4-10</b>	<b>12VD6-13</b>
Type	Varifocal	Varifocal
Format Size	1/2-inch	1/2-inch
Mount Type	CS	C
Focal Length	4–10 mm	6–13 mm
Zoom Ratio	2.5X	2.2X
Relative Aperture (F)	1.8–360	1.8–360
Operation		
Iris	Auto (Direct Drive)	Auto (Direct Drive)
Focus	Manual	Manual
Zoom	Manual	Manual
Angle of View		
Diagonal	46.5°–122.3°	35.5°–75.5°
Horizontal	37.3°–94.8°	28.5°–60.3°
Vertical	28°–69°	21.4°–45.2°
Minimum Object Distance	0.3m	0.3 m
Back Focal Length	8.27–13.90 mm	8.7 mm
Filter Size (mm)	NIL	NIL
Unit Weight	0.22 lb (0.10 kg)	0.20 lb (0.09 kg)
Shipping Weight	1 lb (0.45 kg)	1 lb (0.45 kg)

## CERTIFICATIONS

- CE, Class B (all models)

## OPTIONAL ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.



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# 13ZM\*X\* Series Motorized Zoom Lens

## 1/3-INCH FORMAT, MOTORIZED IRIS

### Product Features

- CS Mount
- For use with 1/3-Inch Format Cameras
- Motorized Iris, Focus, and Zoom
- High Resolution Power in Compact Body



13ZM6X10

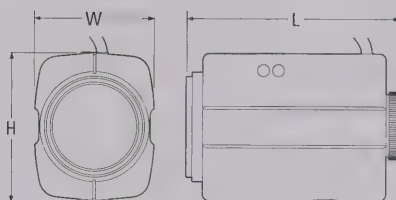
Pelco's **13ZM\*X\* Series** of 1/3-inch lenses feature motorized iris, focus and zoom. Each lens in this series covers a specific range of focal lengths.

Appropriate for indoor and outdoor lighting situations, the **13ZM\*X\* Series** lenses will fit all 1/3-inch CS-mount cameras adaptable to manual iris lenses.

Lenses in this series are available in 8X, 10X and 15X zoom with varying focal lengths.

Maximum apertures of f1.4 or f1.6 and a minimum aperture of fully closed allow excellent performance characteristics across a wide range of lighting conditions.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



	H	W	L
13ZM6X8	3.15 (8.00)	2.57 (6.53)	4.22 (10.72)
13ZM6X10	3.15 (8.00)	2.73 (6.93)	4.66 (11.84)
13ZM6X15	3.15 (8.00)	2.76 (7.01)	4.66 (11.84)

NOTE: ALL MEASUREMENTS ARE WITH LENSES FULLY EXTENDED (FOCUS-NEAR MODE).  
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ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2744  
MANUAL: 27496

C744 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



LENSES  
MOTORIZED IRIS

## MODELS

	<b>132M6X8</b>	<b>132M6X10</b>	<b>132M6X15</b>
Type	Motorized Zoom	Motorized Zoom	Motorized Zoom
Format Size	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS
Focal Length	6~48 mm	6~60 mm	6~90 mm
Zoom Ratio	8X	10X	15X
Relative Aperture (F)	1.4~Close	1.6~Close	1.6~Close
Operation			
Iris	Motorized	Motorized	Motorized
Focus	Motorized	Motorized	Motorized
Zoom	Motorized	Motorized	Motorized
Angle of View			
Diagonal	7.3°~54.4°	5.8°~54.3°	3.9°~54.3°
Horizontal	5.8°~44.2°	4.7°~44.2°	3.1°~44.2°
Vertical	4.4°~33.5°	3.5°~33.5°	2.4°~33.5°
Minimum Object Distance	1.0 m	1.0 m	1.0 m
Back Focal Length	10.10 mm	9.55 mm	9.55 mm
Filter Size (mm)	46P0.75	55P0.75	55P0.75
Unit Weight	0.92 lb (0.42 kg)	1.5 lb (0.67 kg)	1.4 lb (0.65 kg)
Shipping Weight	3 lb (1.36 kg)	3 lb (1.36 kg)	3 lb (1.36 kg)

## CERTIFICATIONS

- CE, Class B (all models)



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# 12ZM8X15C Motorized Zoom Lens

## 1/2-INCH FORMAT, MOTORIZED IRIS

### Product Features

- C Mount
- For use with 1/2-Inch Format Cameras
- Motorized Iris, Focus, and Zoom
- C-Mount Lenses Can Be Adapted for Use on CS-Mount Cameras with Optional CS-Mount Adapter
- High Resolution Power in Compact Body

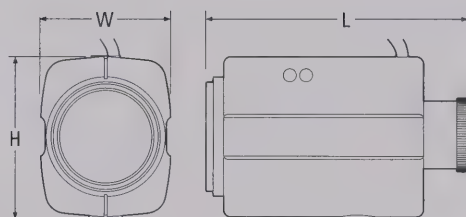


12ZM8X15C

Pelco's **12ZM8X15C** is a 1/2-inch lens that features motorized control of iris, focus, and zoom functions.

Appropriate for indoor and outdoor lighting situations, the **12ZM8X15C** will fit all 1/2- or 1/3-inch C-mount cameras adaptable to manual iris lenses. The optional PCMA40 CS-mount adapter can be used to fit this C-mount lens to a CS-mount camera.

The **12ZM8X15C** has a 15X zoom ratio and a relative aperture range of f1.8-close, which allow excellent performance characteristics across a wide range of lighting conditions.



	H	W	L
12ZM8X15C	3.15 (8.00)	2.73 (6.93)	5.22 (13.26)

NOTE: ALL MEASUREMENTS ARE WITH LENSES FULLY EXTENDED (FOCUS-NEAR MODE).  
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DataFAX  
SPEC: 2743  
MANUAL: 27496

C743 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

### 122M8X15C

Type	Motorized Zoom
Format Size	1/2-inch
Mount Type	C
Focal Length	8~120 mm
Zoom Ratio	15X
Relative Aperture (F)	1.8~Close
Operation	
Iris	Motorized
Focus	Motorized
Zoom	Motorized
Angle of View	
Diagonal	3.9°~53.6°
Horizontal	3.1°~43.6°
Vertical	2.3°~33.0°
Minimum Object Distance	1.3 m
Back Focal Length	19.70 mm
Filter Size (mm)	55P0.75
Unit Weight	1.27 lb (0.58 kg)
Shipping Weight	3 lb (1.36 kg)

## CERTIFICATIONS

- CE, Class B

## OPTIONAL ACCESSORIES

PCMA40	Universal 5 mm ring adapter; adapts C-mount lens to CS-mount camera.
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## 13ZD\*X\* Series Motorized Zoom Lens

### 1/3-INCH FORMAT, AUTO IRIS (DIRECT DRIVE)

#### Product Features

- CS Mount
- Spot Filter
- For Use with 1/3-Inch Format Cameras
- Auto Iris (Direct Drive, No Amplifier), Motorized Focus and Zoom (with or without Presets)
- High Resolution Power in Compact Body



13ZD5.6X20

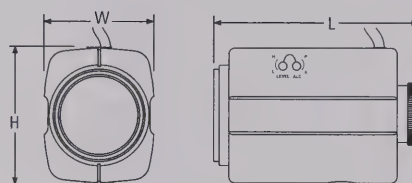
Pelco's **13ZD\*X\* Series** of 1/3-inch motorized zoom lenses cover a wide range of applications from wide angle to telephoto. Each auto iris lens in this series covers a specific range of focal lengths and is available with or without preset positioning.

Appropriate for indoor and outdoor lighting situations, the **13ZD\*X\* Series** lenses will fit all 1/3-inch CS-mount cameras requiring DC-drive auto iris lenses. In addition, all auto-iris lenses include a spot filter. A factory-installed, square four-pin auto iris connector is standard.

Lenses in this series are available in 6X, 8X, 10X, 15X, 20X, and 30X zoom with varying focal lengths.

Various maximum apertures of f0.95 (for difficult low-light applications) to f1.8 and a minimum aperture of f360 allow excellent performance characteristics across a wide range of lighting conditions.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



	H	W	L
13ZD6X6(P)	3.15 (8.00)	2.57 (6.53)	3.47 (8.81)
13ZD6X8(P)	3.15 (8.00)	2.57 (6.53)	4.23 (10.74)
13ZD6X10(P)	3.15 (8.00)	2.73 (6.93)	4.77 (12.12)
13ZD6X15(P)	3.15 (8.00)	2.73 (6.93)	4.77 (12.12)
13ZD5.6X20(P)	3.15 (8.00)	2.73 (6.93)	4.84 (12.29)
13ZD5.5X30(P)	3.15 (8.00)	3.43 (8.71)	6.57 (16.69)

NOTE: ALL MEASUREMENTS ARE WITH LENSES FULLY EXTENDED (FOCUS-NEAR MODE).  
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DataFAX  
SPEC: 2741  
MANUAL: 27496

C741 / REVISED 2-03



International Organization  
for Standardization  
Registered ISO 9001



LENSES,  
MOTORIZED, AUTO IRIS



## MODELS

	<b>13ZD6X6/ 13ZD6X6P</b>	<b>13ZD6X8/ 13ZD6X8P</b>	<b>13ZD6X10/ 13ZD6X10P</b>	<b>13ZD6X15/ 13ZD6X15P</b>
Type	Motorized Zoom	Motorized Zoom	Motorized Zoom	Motorized Zoom
Format Size	1/3-inch	1/3-inch	1/3-inch	1/3-inch
Mount Type	CS	CS	CS	CS
Focal Length	6-36 mm	6-48 mm	6-60 mm	6-90 mm
Zoom Ratio	6X	8X	10X	15X
Relative Aperture (F)	0.95-360	1.4-360	1.6-360	1.6-360
Operation				
Iris	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)	Auto (Direct Drive)
Focus	Motorized*	Motorized*	Motorized*	Motorized*
Zoom	Motorized*	Motorized*	Motorized*	Motorized*
Angle of View				
Diagonal	9.7°-53.7°	7.3°-54.4°	5.8°-54.3°	3.9°-54.3°
Horizontal	7.8°-43.7°	5.8°-44.2°	4.7°-44.2°	3.1°-44.2°
Vertical	5.9°-33.0°	4.4°-33.5°	3.5°-33.5°	2.4°-33.5°
Minimum Object Distance	1.0 m	1.0 m	1.0 m	1.0 m
Back Focal Length	8.66 mm	10.10 mm	9.55 mm	9.55 mm
Filter Size (mm)	46P0.75	46P0.75	55P0.75	55P0.75
Unit Weight	0.88 lb (0.40 kg)	0.92 lb (0.42 kg)	1.19 lb (0.54 kg)	1.43 lb (0.65 kg)
Shipping Weight	2 lb (0.90 kg)	2 lb (0.90 kg)	3 lb (1.36 kg)	3 lb (1.36 kg)
	<b>13ZD5.6X20/ 13ZD5.6X20P</b>	<b>13ZD5.5X30/ 13ZD5.5X30P</b>		
Type	Motorized Zoom	Motorized Zoom		
Format Size	1/3-inch	1/3-inch		
Mount Type	CS	CS		
Focal Length	5.6-112 mm	5.5-165 mm		
Zoom Ratio	20X	30X		
Relative Aperture (F)	1.6-360	1.8-360		
Operation				
Iris	Auto (Direct Drive)	Auto (Direct Drive)		
Focus	Motorized*	Motorized*		
Zoom	Motorized*	Motorized*		
Angle of View				
Diagonal	3.2°-59.4°	2.1°-58.7°		
Horizontal	2.6°-47.6°	1.7°-47.6°		
Vertical	1.9°-35.7°	1.3°-33.9°		
Minimum Object Distance	1.5 m	1.8 m		
Back Focal Length	8.97 mm	15.5 mm		
Filter Size (mm)	55P0.75	72P0.75		
Unit Weight	1.23 lb (0.56 kg)	1.84 lb (0.83 kg)		
Shipping Weight	3 lb (1.36 kg)	3 lb (1.36 kg)		

\*Model numbers with P suffix are motorized with preset capability.

## CERTIFICATIONS

- CE, Class B (all models)

## OPTIONAL ACCESSORIES

LDC100

Auto iris drive converter. Converts a DC-drive auto iris lens to a video drive auto iris lens. Compatible with all lens size formats.



### Pelco Worldwide Headquarters:

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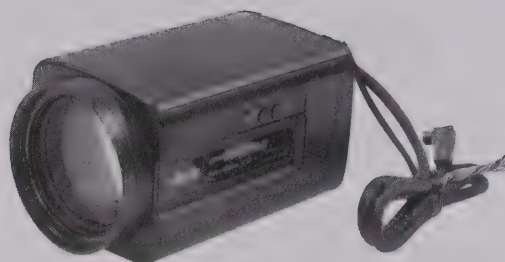


# 12ZV\*X\*C Series Motorized Zoom Lens

## 1/2-INCH FORMAT, AUTO IRIS (VIDEO DRIVE)

### Product Features

- C Mount (all except 12ZV11X18 and 12ZV11X18P)
- Spot Filter
- For Use with 1/2-Inch Format Cameras
- Auto Iris (Video Drive with Amplifier), Motorized Focus and Zoom (with or without Presets)
- C-Mount Lenses Can Be Adapted for Use on CS-Mount Cameras with Optional CS-Mount Adapter
- High Resolution Power in Compact Body



12ZV8X10CP

LENSES  
MOTORIZED, AUTO IRIS

Pelco's **12ZV\*X\* Series** of 1/2-inch motorized zoom lenses cover a wide range of applications from wide angle to telephoto. Each auto iris lens in this series covers a specific range of focal lengths and is available with or without preset positioning.

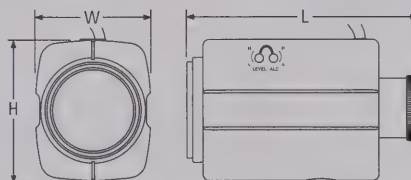
Appropriate for indoor and outdoor lighting situations, the **12ZV\*X\* Series** lenses will fit all 1/2- or 1/3-inch C-mount cameras (except for the 12ZV11X18(P) which is CS mount) requiring video drive auto iris lenses. The optional PCMA40 CS-mount adapter can be used to fit the C-mount lenses to CS-mount cameras. In addition, all auto iris lenses include a spot filter.

A factory-installed, square four-pin auto iris connector is standard.

Lenses in this series are available in 10X, 15X, and 18X zoom with varying focal lengths.

Maximum aperture of f1.8 and a minimum aperture of f360 allow excellent performance characteristics across a wide range of lighting conditions.

Select the model lens that best suits your needs from the Technical Specifications section of this product specification sheet.



	H	W	L
12ZV8X10C(P)	3.15 (8.00)	2.73 (6.93)	5.20 (13.21)
12ZV8X15C(P)	3.15 (8.00)	2.73 (6.93)	5.20 (13.21)
12ZV11X18(P)	3.15 (8.00)	3.42 (8.69)	6.71 (17.04)

NOTE: ALL MEASUREMENTS ARE WITH LENSES FULLY EXTENDED (FOCUS-NEAR MODE).  
VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2739  
MANUAL: 27496

C739 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

	<b>12ZV8X10C/ 12ZV8X10CP</b>	<b>12ZV8X15C/ 12ZV8X15CP</b>	<b>12ZV11X18/ 12ZV11X18P</b>
Type	Motorized Zoom	Motorized Zoom	Motorized Zoom
Format Size	1/2-inch	1/2-inch	1/2-inch
Mount Type	C	C	CS
Focal Length	8~80 mm	8~120 mm	11~200 mm
Zoom Ratio	10X	15X	18X
Relative Aperture (F)	1.8~360	1.8~360	1.8~360
Operation			
Iris	Auto (Video Drive)	Auto (Video Drive)	Auto (Video Drive)
Focus	Motorized*	Motorized*	Motorized*
Zoom	Motorized*	Motorized*	Motorized*
Angle of View			
Diagonal	5.8°~53.6°	3.9°~53.6°	2.3°~39.7°
Horizontal	4.6°~43.6°	3.1°~43.6°	1.9°~32.1°
Vertical	3.5~33.0°	2.3°~33.0°	1.4°~24.3°
Minimum Object Distance	1.2 m	1.2 m	1.5 m
Back Focal Length	14.66 mm	14.66 mm	10.21 mm
Filter Size (mm)	55P0.75	55P0.75	55P0.75
Unit Weight	1.27 lb (0.58 kg)	1.63 lb (0.74 kg)	1.90 lb (0.88 kg)
Shipping Weight	3 lb (1.36 kg)	4 lb (1.81 kg)	3 lb (1.36 kg)

\*Model numbers with P suffix are motorized with preset capability.

## CERTIFICATIONS

- CE compliant (all models)

## OPTIONS

PCMA40      Universal 5 mm ring adapter; adapts C-mount lens to CS-mount camera.



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## LDC100 Lens Drive Converter

### AUTO IRIS DC DRIVE TO VIDEO DRIVE

#### Product Features

- Operate an Auto Iris DC Lens with Video Signal Output
- Built-in Video Signal Amplifier
- Automatic Gain Control (AGC)
- Brightness Level Settings
- Standard, 4-Pin Connectors
- Easy to Install

The **LDC100** converts an auto iris lens from DC drive to video drive. A built-in amplifier in the **LDC100** increases the video signal to automatically operate the open/close commands of the lens in response to changing light conditions.

The **LDC100** is easy to install: just connect the LDC converter to the lens connector on the camera, and connect the video drive lens to the lens connector on the LDC converter. Once installed, enhance the picture quality with level adjustments for automatic gain control (AGC) and brightness.

The **LDC100** can be used with any Pelco camera and DC lens equipped with a standard, four-pin square connector.



LDC100



LENSES,  
ACCESSORIES



DataFAX  
SPEC: 2784  
MANUAL: 27846

C784 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

LDC100      Lens converter for use with auto iris direct drive lenses

## MECHANICAL

Connectors      Standard 4-pin square female connector  
Standard 4-pin square male connector

## GENERAL

Construction      Plastic  
Finish      Black  
Shipping Weight      1 lb (0.5 kg)

## RECOMMENDED LENSES

13FD Series      Fixed focal lenses, 1/3-inch format, auto iris direct drive  
13ZD Series      Motorized zoom lenses, 1/3-inch format  
12VD, 13VD Series      Varifocal lenses, 1/2- and 1/3-inch format



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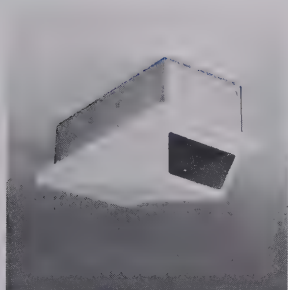
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## ENCLOSURES

### Indoor, Outdoor, High Security, and Specialty Housings



Enclosures are designed to protect a camera and lens from environmental conditions including hazardous atmospheres, weather and vandalism. Pelco manufactures a variety of enclosures including indoor, outdoor, specialty, and high security models.

It is important to choose the right enclosure for your application. When selecting an enclosure consider the following factors:

- **Environment** – Where will the enclosure be installed — indoors or outdoors? Are there any adverse environmental conditions?
- **Equipment** – What size and type of camera, lens (fixed or zoom), and other attachments are required to meet the specifications of the installation?
- **Power** – What is the intended power source?
- **Mounting** – Where will the enclosure be mounted (wall, ceiling, or pole)?



Pelco also offers pre-configured camera systems that include enclosure, camera, and lens, and are pre-assembled for your convenience at no additional cost to you. Refer to the ImagePak Selection Guides in the Camera Systems section of this book for available models.



#### Indoor

Pelco's selection of indoor enclosures includes security-rated, in-ceiling, and corner mount models. Indoor enclosures are not environmentally sealed or capable of being electrically heated or cooled. If indoor conditions require the use of a sealed, heated/cooled unit, use an outdoor enclosure.

#### Outdoor

Outdoor enclosures are designed to withstand wide ranges of temperature, humidity, precipitation, and sunlight. Factory- and field-installed accessories may include blower, heater, window defroster, sun shroud, thermal insulation, and 120 VAC electrical outlet.

#### Specialty

Pelco takes great pride in offering the following special application enclosures: explosion-proof enclosures required for potentially combustible atmospheres; rain- and dustproof enclosures that operate in dusty or high-particulate environments; and corrosionproof enclosures that are exposed to corrosive or oxidizing chemicals.

#### High Security

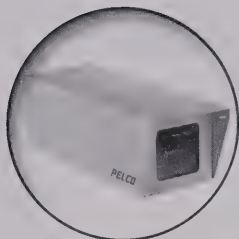
High security enclosures are used where structural integrity and vandalism are a priority. These enclosures are perfect for public areas including detention and psychiatric facilities.

Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Indoor Enclosure Selection Guide
- Outdoor Enclosure Selection Guide
- Specialty Enclosure Selection Guide
- High Security Enclosure Selection Guide

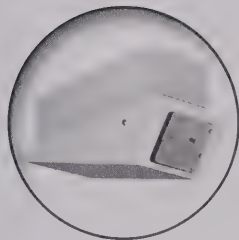


# Indoor Enclosure Selection Guide



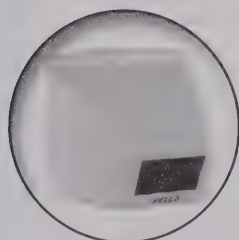
**EH100-8**  
Economy  
Enclosure

Model Number	Maximum Size Camera and Lens H x W x L – Inches	Surface Mount	Tamper-Resistant Hardware	Mounting Plate (Optional)	Suggested Mounts	See Page
EH100-8	2.75 x 3.50 x 7.50 (6.99 x 8.99 x 19.05 cm)		✓		EM1450*, EM3000**	155
EH100-10	2.75 x 3.50 x 9.50 (6.99 x 8.99 x 24.13 cm)		✓			
EH3010	2.75 x 3.75 x 8.00 (6.99 x 9.52 x 20.32 cm)				EM1400*, EM3000**	157
EH3014	2.75 x 3.75 x 12.00 (6.99 x 9.52 x 30.48 cm)					
EH4010	3.50 x 5.25 x 8.00 (8.89 x 13.33 x 20.32 cm)				EM1400*, EM3000**	159
EH4014	3.50 x 3.25 x 12.00 (8.89 x 13.33 x 30.48 cm)					



**EH2020**  
In-Ceiling Mount  
Enclosure

EH2020	3.00 x 2.80 x 8.00 (7.62 x 7.11 x 20.32 cm)		✓	✓	E2020***	161
EH2100	3.00 x 10.00 x 4.00 (7.62 x 10.16 x 25.4 cm)			✓	E2100***	163
EH2100P	3.00 x 10.00 x 4.00 (7.62 x 10.16 x 25.4 cm)			✓	E2100***	163
EH1000	4.50 x 6.50 x 15.00 (11.43 x 16.51 x 38.10 cm)			✓	E1003***	165



**EH2400**  
Corner Mount  
Enclosure

EH2400	4.00 x 4.00 x 8.00 (10.16 x 10.16 x 20.32 cm)	✓	✓			167
HS2400	4.00 x 4.00 x 8.00 (10.16 x 10.16 x 20.32 cm)	✓	✓			167

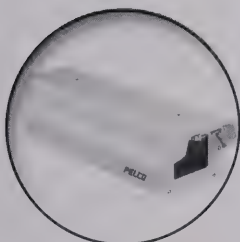
\* Wall mount  
\*\* Ceiling mount  
\*\*\* Optional mounting plate

# Outdoor Enclosure Selection Guide



**EH2500 Series**  
Small, Rain- and  
Dustproof

Model Number	Maximum Size Camera and Lens H x W x L – Inches	VAC	Power Consumption	Tamper-Resistant Hardware	Heater	Blower	Defroster	Options ♦	Suggested Mounts	See Page
EH2508	2.75 x 2.75 x 6.25 (6.99 x 6.99 x 15.88 cm)	N/A	N/A	✓				Sun Shroud	EM1450*, EM3000**	169
EH2508-1	2.75 x 2.75 x 5.25 (6.99 x 6.99 x 13.34 cm)	120	15W	✓	✓					
EH2508-2		24	15W	✓	✓					
EH2508-3		230	15W	✓	✓					
EH2512	2.75 x 2.75 x 10.25 (6.99 x 6.99 x 26.04 cm)	N/A	N/A	✓				Sun Shroud		
EH2512-1	2.75 x 2.75 x 9.25 (6.99 x 6.99 x 23.50 cm)	120	15W	✓	✓					
EH2512-2		24	15W	✓	✓					
EH2512-3		230	15W	✓	✓					
EH2515	2.75 x 2.75 x 13.25 (6.99 x 6.99 x 33.66 cm)	N/A	N/A	✓				Sun Shroud		
EH2515-1	2.75 x 2.75 x 12.25 (6.99 x 6.99 x 13.12 cm)	120	15W	✓	✓					
EH2515-2		24	15W	✓	✓					
EH2515-3		230	15W	✓	✓					



**EH3500 Series**  
Small

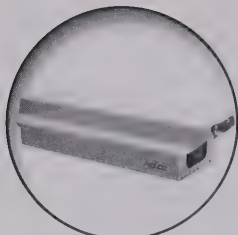
EH3508	3.00 x 2.87 x 6.80 (7.62 x 7.28 x 17.27 cm)	N/A	N/A					Sun Shroud	EM1450*, EM3000**	171
EH3508-1	3.00 x 2.87 x 5.00 (7.62 x 7.28 x 12.70 cm)	120	13W		✓		✓			
EH3508-2		24	13W		✓		✓			
EH3508-3		230	13W		✓		✓			
EH3512	3.00 x 2.87 x 10.25 (7.62 x 7.28 x 26.03 cm)	N/A	N/A					Sun Shroud	EM1450*, EM3000** EM3512◆◆	173
EH3512-1	3.00 x 2.87 x 9.00 (7.62 x 7.28 x 22.86 cm)	120	13W		✓	✓	✓			
EH3512-2		24	13W		✓	✓	✓			
EH3512-3		230	13W		✓	✓	✓			
EH3512-1HD	3.00 x 2.87 x 10.00 (7.62 x 7.28 x 25.40 cm)	120	13W		✓		✓			
EH3512-2HD		24	13W		✓		✓			
EH3512-3HD		230	13W		✓		✓			
EH3515	3.00 x 2.87 x 13.25 (7.62 x 7.28 x 33.66 cm)	N/A	N/A					Sun Shroud	EM1450*, EM3000**	173
EH3515-1	3.00 x 2.87 x 12.00 (7.62 x 7.28 x 30.48 cm)	120	27W		✓	✓	✓			
EH3515-2		24	25W		✓	✓	✓			
EH3515-3		230	22W		✓	✓	✓			
EH3515-1HD	3.00 x 2.87 x 13.00 (7.62 x 7.28 x 33.02 cm)	120	13W		✓		✓			
EH3515-2HD		24	13W		✓		✓			
EH3515-3HD		230	13W		✓		✓			

◆ Refer to specification sheet for applicable model numbers.

◆◆ Compatible with EH3512, EH3512-2 and EH3512-2HD models only.

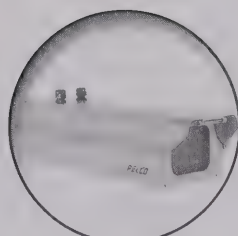
\* Wall mount

\*\* Ceiling mount



**EH4700 Series  
Medium**

Model Number	Maximum Size Camera and Lens H x W x L – Inches	VAC	Power Consumption	Heater	Blower	Defroster	Options	Suggested Mounts	See Page
EH4718	4.25 x 5.50 x 17.00 (10.79 x 13.97 x 43.18 cm)	N/A	N/A				Defroster, Sun Shroud, Thermal Insulation	EM22*, EM3000**	175
EH4718-1	4.25 x 4.75 x 13.00 (10.79 x 12.07 x 33.02 cm)	120	68W	✓	✓				
EH4718-2		24	58W	✓	✓				
EH4718-3		230	63W	✓	✓				
EH4722	4.25 x 5.50 x 21.00 (10.79 x 13.97 x 53.34 cm)	N/A	N/A				Defroster, Sun Shroud, Thermal Insulation		
EH4722-1	4.25 x 4.75 x 17.00 (10.79 x 12.07 x 43.18 cm)	120	68W	✓	✓				
EH4722-2		24	58W	✓	✓				
EH4722-3		230	63W	✓	✓				



**EH4700DB Series  
Medium, Top Mount**

EH4712DB	4.00 x 3.50 x 12.50 (10.16 x 8.89 x 31.75 cm)	N/A	N/A					EM1900U*, EM1009U**	177
EH4712DB-1	4.00 x 3.50 x 8.50 (10.16 x 8.89 x 21.59 cm)	120	68W	✓	✓		Defroster		
EH4712DB-2		24	58W	✓	✓				
EH4712DB-3		230	63W	✓	✓				
EH4718DB	4.00 x 3.50 x 16.50 (10.16 x 8.89 x 41.91 cm)	N/A	N/A						
EH4718DB-1	4.00 x 3.50 x 12.50 (10.16 x 8.89 x 21.59 cm)	120	68W	✓	✓		Defroster		
EH4718DB-2		24	58W	✓	✓				
EH4718DB-3		230	63W	✓	✓				



**EH5700 Series  
Large**

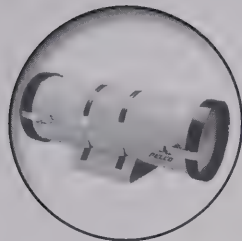
EH5723	5.50 x 7.50 x 22.00 (13.97 x 19.05 x 55.88 cm)	N/A	N/A				Defroster, Sun Shroud, Thermal Insulation, Window Wiper	EM22*, MM22***	179
EH5723-1	5.50 x 6.25 x 15.50 (13.97 x 15.88 x 39.37 cm)	120	150W	✓	✓				
EH5723-2		24	60W	✓	✓				
EH5723-3		230	85W	✓	✓				
EH5729	5.50 x 7.50 x 28.00 (13.97 x 19.05 x 71.12 cm)	N/A	N/A				Defroster, Sun Shroud, Thermal Insulation, Window Wiper		
EH5729-1	5.50 x 6.25 x 21.50 (13.97 x 15.88 x 54.61 cm)	120	105W	✓	✓				
EH5729-2		24	60W	✓	✓				
EH5729-3		230	85W	✓	✓				

◆ Refer to specification sheet for applicable model numbers.

\* Wall mount  
\*\* Ceiling mount  
\*\*\* Pedestal mount



# Specialty Enclosure Selection Guide



**E700 Series  
Dust-Tight**

Model Number	Maximum Size Camera and Lens H x W x L – Inches	VAC	Power Consumption	Options ♦	Suggested Mounts	See Page
E706-16	3.50 x 4.25 x 13.25 (8.89 x 10.79 x 33.66 cm)	N/A	N/A	Heater, Blower Air Funnel, Sun Shroud	EM22*, MM22**	181
E706-16P		N/A	N/A			
E706-16PS		N/A	N/A			
E706-16S		N/A	N/A			



**EH8100 Series  
Pressurized**

EH8104	2.50 x 2.50 x 14.00 (6.35 x 6.35 x 35.56 cm)	120	40W	Sun Shroud	EM22*, MM22**	183
EH8106	4.00 x 4.00 x 18.00 (10.16 x 10.16 x 45.72 cm)	120	80W			



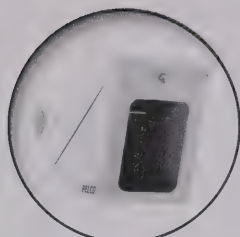
**EHX\*E Series  
Explosionproof**

EHX4E	1.75 x 3.375 x 12.00 (4.45 x 8.57 x 30.48 cm)	N/A	N/A	Heater, Blower Sun Shroud	WM2000*, PM2000**	185
EHX6E	3.75 x 4.375 x 24.00 (9.53 x 11.11 x 60.96 cm)	N/A	N/A			
EHX6E-16	3.75 x 4.375 x 16.00 (9.53 x 11.11 x 40.64 cm)	N/A	N/A			
EHX8E	5.75 x 5.125 x 24.00 (14.60 x 13.02 x 60.96 cm)	N/A	N/A			

♦ Refer to specification sheet for applicable model numbers.

\*Wall mount  
\*\*Pedestal mount

# High Security Enclosure Selection Guide



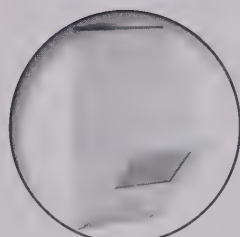
**HS8080**  
Ceiling Mount

Model Number	Maximum Size Camera and Lens H x W x L – inches	VAC	Power Consumption	Tamper-Resistant Hardware	Options ♦	Suggested Mounts	See Page
HS2100	3.00 x 4.00 x 10.00 (7.62 x 10.16 x 25.40 cm)	N/A	N/A	✓	Rotating Mount Plate	N/A	197
HS8080	3.50 x 3.00 x 9.75 (8.89 X 7.62 X 24.77 cm)	N/A	N/A	✓		N/A	187
HS8134		N/A	N/A	✓		N/A	



**HS3000**  
Surface Mount

HS8000	4.00 x 4.00 x 8.00 (10.16 x 10.16 x 20.32 cm)	N/A	N/A	✓	Heater	N/A	189
HS8013	4.00 x 4.00 x 11.00 (10.16 x 10.16 x 27.94 cm)	N/A	N/A	✓		N/A	
HS3000	3.75 x 3.25 x 9.00 (9.52 x 8.25 x 22.86 cm)	N/A	N/A	✓		N/A	199
HS3020	3.75 x 3.25 x 18.00 (9.52 x 8.25 x 45.72 cm)	N/A	N/A	✓		N/A	
HS4012	4.50 x 4.50 x 10.375 (11.43 x 11.43 x 26.33 cm)	N/A	N/A	✓		EM22* MM22**	201



**HS2500**  
Corner Mount

HS1500	4.00 x 4.00 x 8.00 (10.16 x 10.16 x 20.32 cm)	N/A	N/A	✓	Heater/Blower	N/A	193
HS2000	3.00 x 3.00 x 6.00 (7.62 x 7.62 x 15.24 cm)	N/A	N/A	✓		N/A	
HS2500	3.00 x 3.00 x 10.00 (7.62 x 7.62 x 25.40 cm)	N/A	N/A	✓	Heater	N/A	195
HS2500/SPKR		N/A	N/A	✓		N/A	



**HS4514**  
Bullet-Resistant

HS4514	6.70 x 5.25 x 14.00 (17.02 x 13.34 x 35.56 cm)	N/A	N/A	✓	Heater Blower Sun Shroud	WM2000* PM2000**	191
HS4514-1	6.25 x 3.75 x 12.00 (15.88 x 9.53 x 30.48 cm)	120	60W	✓			
HS4514-2	6.25 x 3.75 x 12.00 (15.88 x 9.53 x 30.48 cm)	24	50W	✓			
HS4514-3		230	55W	✓			

♦ Refer to specification sheet for applicable model numbers.

\* Wall mount

\*\* Pedestal mount



# EH100-8/EH100-10 Enclosure

## INDOOR, SECURITY RATED, WALL/PEDESTAL MOUNT

### Product Features

- Low Cost
- Indoor Applications
- Aluminum Construction
- Adjustable Camera Mount
- Wall or Pedestal Mounting
- Attractive, Rugged Powder Coat Finish
- Single Tamper-Proof Screw Provides Quick Access and Increased Security



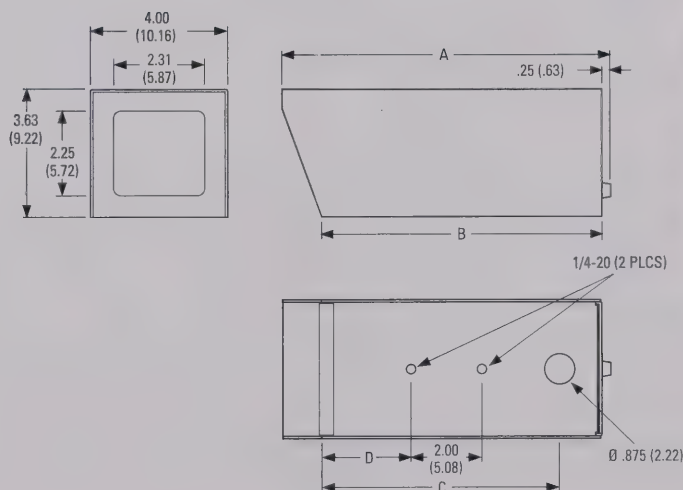
EH100-8 ENCLOSURE

The **EH100 Series** are low cost, light duty, indoor camera enclosures designed for use with various cameras on the market. These enclosures will accommodate fixed focal length lenses or motorized zoom lenses. All-aluminum construction and rugged powder-coated surfaces make the **EH100 Series** a lightweight, attractive camera enclosure for most indoor applications.

The simple, interlocking clamshell design with removable housing provides a fast, simple installation. Once installed, access to camera and lens only requires removal of one tamper-proof screw.

The **EH100 Series** enclosures have an adjustable camera sled that, when installed upside down, can also serve as an elevation block.

A knockout on the base of the enclosure provides the opening for all cabling or a 0.5-inch conduit connection.



	A	B	C	D
EH100-8	9.25 (23.50)	8.00 (20.32)	6.81 (17.30)	2.59 (6.58)
EH100-10	11.25 (28.58)	10.00 (25.40)	8.81 (22.38)	3.59 (9.12)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21464  
MANUAL: 214646

C1464 / REVISED 10-00

International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

EH100-8	Security-rated, indoor enclosure, 7.50-inch (19.05 cm) maximum length for camera, lens, and cable connections
EH100-10	Security-rated, indoor enclosure, 9.50-inch (24.13 cm) maximum length for camera, lens, and cable connections

## MECHANICAL

Camera Mounting Maximum Camera and Lens Size	Multiple holes on adjustable camera sled  Accepts camera and lens combinations* (including BNC connector) up to:
EH100-8	2.75" H x 3.50" W x 7.50" L (6.99 x 8.89 x 19.05 cm)
EH100-10	2.75" H x 3.50" W x 9.50" L (6.99 x 8.89 x 24.13 cm)
Viewing Window	.1875-inch (4.76 mm) thick Lexan®
Viewing Window Area	2.25" H x 2.31" W (5.72 x 5.87 cm)
Cable Entry	.875-inch (2.22 cm) diameter knockout; will accept 0.5-inch (1.27 cm) conduit fitting
Security	Tamper-resistant button-head screw (hollow Allen wrench supplied)

\*Assumes lens is fully extended.

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Indoor
Unit Weight	
EH100-8	1.35 lb (0.61 kg)
EH100-10	1.51 lb (0.68 kg)
Shipping Weight	
EH100-8	2 lb (0.9 kg)
EH100-10	3 lb (1.35 kg)

## RECOMMENDED MOUNTS

### Ceiling/Pedestal

EM1009U, EM1015U	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.12 kg)
EM3000	Ceiling J-mount; maximum load 20 lb (9.06 kg).

### Wall

EM1450	Light duty wall mount; maximum load 20 lb (9.06 kg)
EM1900U	Medium duty wall mount; maximum load 40 lb (18.12 kg)
EM2400	Light duty (indoor) wall mount; maximum load 20 lb (9.06 kg)



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## EH3010/EH3014 Enclosure

### INDOOR, SMALL

#### Product Features

- Low Cost
- Indoor Applications
- Can be used with Fixed Mount or Pan/Tilt
- Easy Access for Service and Installation
- Upright or Inverted Applications
- For Use with Small-to-Medium Format Cameras

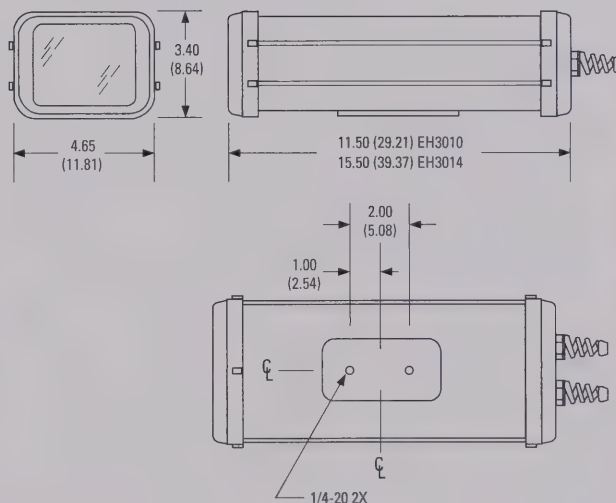


EH3010 ENCLOSURE

The **EH3010** and **EH3014** are low cost, indoor camera enclosures specifically engineered for use with small-to-medium format cameras with fixed focal length or varifocal lenses. The enclosures are attractively designed to complement any decor.

The **EH3000 Series** is engineered for ease of installation and service. The removable rear cap provides easy access to the slide-out platform on which the camera is mounted. The adjustable glands on the rear cap allow for easy installation of the power and video cables. The removable front cap allows manual lens adjustments to be made without removing the camera.

These enclosures are suitable for upright or inverted use and can be used in fixed mount applications or mounted to a light duty pan/tilt such as our PT270 Series or PT280-24P. They also can be used with our PS20 Series scanner (when used indoors).



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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ENCLOSURES  
INDOOR



DataFAX  
SPEC: 2404  
MANUAL: 24046

C404 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

EH3010	Indoor extruded aluminum enclosure, 11.50-inch (29.21 cm) length
EH3014	Indoor extruded aluminum enclosure, 15.50-inch (39.37 cm) length

## MECHANICAL

Camera Mounting	Multiple holes on camera sled
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: EH3010 2.75" H x 3.75" W x 8.00" L (6.98 x 9.52 x 20.32 cm) EH3014 2.75" H x 3.75" W x 12.00" L (6.98 x 9.52 x 30.48 cm)
Viewing Window	0.125" (3.17 mm) thick Lucite® SAR (Super Abrasion Resistant) acrylic
Viewing Window Area	2.50" (6.35 cm) x 3.50" (8.89 cm)
Cable Entry	Two compression glands on rear cap

\*Assumes lens is fully extended.

## GENERAL

Construction	Extruded aluminum body; injection molded black ABS plastic end caps
Finish	Gray polyester powder coat
Environment	Indoor; 32° to 120°F (0° to 49°C)
Unit Weight	
EH3010	2.27 lb (1.03 kg)
EH3014	3.04 lb (1.38 kg)
Shipping Weight	
EH3010	4 lb (1.81 kg)
EH3014	5 lb (2.26 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed

## RECOMMENDED MOUNTS

Ceiling/Pedestal	CM4400	Light duty ceiling mount; maximum load 15 lb (6.79 kg)
	EM1009U/ EM1015U	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.12 kg)
	EM3000	Ceiling J-mount; maximum load 20 lb (9.06 kg)
Wall	EM1400	Light duty wall mount; maximum load 20 lb (9.06 kg)
	EM1900U	Medium duty wall mount; maximum load 40 lb (18.12 kg)
	EM2400	Light duty wall mount; maximum load 20 lb (9.06 kg)
	EM4400	Light duty wall mount; maximum load 15 lb (6.79 kg)
Pipe/Pole	EM1109	Medium duty pedestal mount for horizontal or vertical pipe or pole applications; maximum load 40 lb (18.12 kg)
	EM2000	Medium duty mount for vertical pipe or pole applications; maximum load 40 lb (18.12 kg)
	EM2200	Medium duty mount for horizontal pipe or pole applications; maximum load 40 lb (18.12 kg)

## RECOMMENDED PAN/TILTS

PT270 Series	Light duty pan/tilt, 24/120/230 VAC; maximum load 15 lb (6.8 kg)
PT280-24P	Light duty pan/tilt, 24 VAC; maximum load 15 lb (6.8 kg)
PS20 Series	Medium duty scanner, 24/120/230 VAC; maximum load 35 lb (15.7 kg)

Indicates change or addition.



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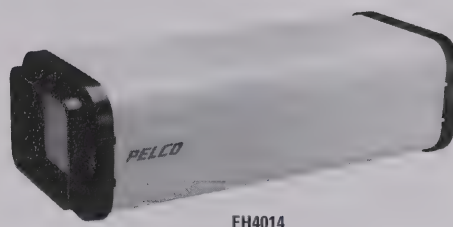
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## EH4010/EH4014 Enclosure INDOOR, MEDIUM

### Product Features

- Low Cost
- Indoor Applications
- Contemporary Design
- Medium Sizes
- For Use with Fixed Mount or Pan/Tilt
- Easy Access for Service and Installation
- For Use with Medium-to-Large Format Cameras
- Upright or Inverted Applications



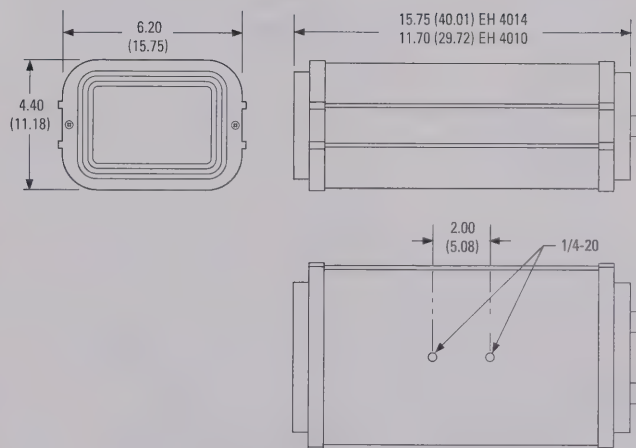
EH4014

The **EH4000 Series** are low cost camera enclosures designed especially for indoor applications.

The enclosure features a removable rear cap for easy access to camera sled. Adjustable glands on the rear cap allow for easy installation of the power and video cables, and a removable front cap allows the installer to manually adjust the lens without removing the camera.

The **EH4010** can be used with medium format cameras and the **EH4014** can be used with medium-to-large format cameras. The **EH4014** will accommodate fixed focal length lenses or motorized zoom lenses (with or without auto iris).

These enclosures can be used in fixed mount applications or mounted to a light duty pan/tilt, such as our PT270 Series or PT280-24P. They can also be used with our PS20 Series scanner (when used indoors).



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EH4010/EH4014 DIMENSION DRAWING



DataFAX  
SPEC: 2413  
MANUAL: 24136

C413 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



ENCLOSURES  
INDOOR

## MODELS

EH4010	Extruded aluminum enclosure, 11.70-inch (29.71 cm) body length
EH4014	Extruded aluminum enclosure, 15.75-inch (40.01 cm) body length

## MECHANICAL

Camera Mounting	
EH4010	Adjustable L-shaped bracket with one mounting hole attached to the slide-out rail
EH4014	Multiple holes on removable camera sled
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to:
EH4010	3.50" H x 5.25" W x 8.00" L (8.89 x 13.33 x 20.32 cm)
EH4014	3.50" H x 5.25" W x 12.00" L (8.89 x 13.33 x 30.48 cm)
Viewing Window	0.125" (3.17 mm) thick Lexan®
Viewing Window Area	2.50" H x 3.75" W (6.35 x 9.52 cm)
Cable Entry	Two compression glands on rear cap; maximum 5/16" (0.79 cm) cable diameter

\*Assumes lens is fully extended.

## GENERAL

Construction	Extruded aluminum body; injection molded black ABS plastic end caps
Finish	Gray polyester powder coat
Environment	Indoor only
Unit Weight	
EH4010	3.68 lb (1.67 kg)
EH4014	4.98 lb (2.26 kg)
Shipping Weight	
EH4010	5 lb (2.26 kg)
EH4014	6 lb (2.7 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed

## OPTIONAL ACCESSORIES

LK4000	Tamper-proof screw kit. Includes 100 tamper-proof screws and one insertion/removal tool.
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## RECOMMENDED MOUNTS

Ceiling/Pedestal	EM1009U, EM1015U	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.12 kg)
	EM3000	Ceiling J-mount; maximum load 40 lb (18.12 kg)
	MM22	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.12 kg)
Wall	EM1400	Light duty wall mount; maximum load 20 lb (9.06 kg)
	EM1900U	Medium duty wall mount; maximum load 40 lb (18.12 kg)
	EM2400	Light duty wall mount; maximum load 20 lb (9.06 kg)
Pipe/Pole	EM22	Medium duty wall mount; maximum load 40 lb (18.12 kg)
	EM1109	Medium duty pedestal mount for vertical pipe or pole applications; maximum load 40 lb (18.12 kg)
	EM2000	Medium duty mount for vertical pipe or pole applications; maximum load 40 lb (18.12 kg)
	EM2200	Medium duty mount for horizontal pipe or pole applications; maximum load 40 lb (18.12 kg)

## RECOMMENDED PAN/TILTS

PT270 Series	Light duty pan/tilt, 24/120/230 VAC; maximum load 15 lb (6.8 kg)
PT280-24P	Light duty pan/tilt, 24 VAC, with pre-wired cable; maximum load 15 lb (6.8 kg)
PS20 Series	Medium duty scanner, 24/120/230 VAC; maximum load 35 lb (15.7 kg)



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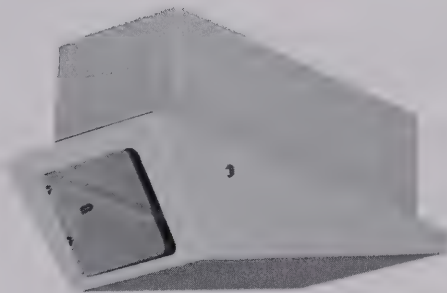


## EH2020 Enclosure

### INDOOR, SECURITY RATED, IN-CEILING, FOR SINGLE CAMERA

#### Product Features

- Low Profile, Small Wedge Style
- Designed for Small-to-Medium Format Cameras
- For Use in Fixed or Dropped (False) Ceilings
- Removable Lid Opens for Convenient Access to Camera
- Steel Construction
- Meets Most Fire Code Requirements

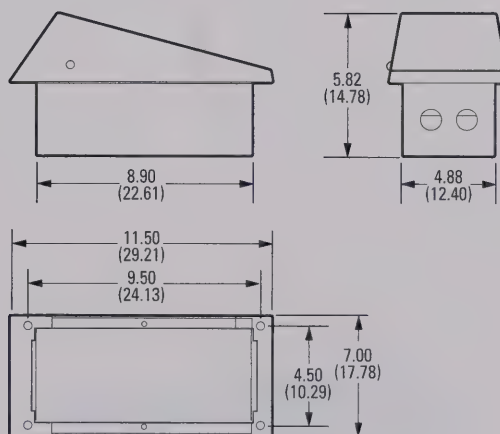


The **EH2020** is a small, low profile ceiling enclosure designed for use with small-to-medium format cameras. The unobtrusive, compact design complements any business or office decor and provides increased protection for fixed camera installations.

The **EH2020** is designed for use in hard or drop tile ceilings. Two ceiling support mounting brackets are included to mount the enclosure directly on a ceiling tile. Pelco also offers an optional 360-degree rotating mounting plate (E2020) for drop tile ceiling applications, which allows the enclosure to be rotated in 10-degree increments to change the viewing area. The enclosure is constructed from steel to provide increased protection and durability.

The **EH2020** is designed for ease of installation and service. The lid is removable to provide convenient access for camera and lens adjustments. The enclosure has an adjustable camera mounting sled to accommodate small-to-medium format cameras.

Two tamper-resistant screws secure the enclosure lid to the back box, thereby restricting access by unauthorized personnel.



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**DataFAX**  
SPEC: 21493  
MANUAL: 214936

C1493 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



ENCLOSURES  
INDOOR



## MODEL

EH2020

Small, low profile, security-rated ceiling enclosure

## MECHANICAL

### Camera Mounting

Adjustable bracket capable of supporting a maximum weight of 10 lb (4.53 kg)

### Maximum Camera and Lens Size

Accepts camera and lens combinations\* (including BNC connector) up to:  
3.0" H x 2.8" W x 8.0" L  
(7.62 x 7.11 x 20.32 cm)

### Ceiling Mounting

Upper section flange-mounted to fixed ceiling or ceiling tile. Two soft-ceiling mounting brackets provided. Can also be mounted in E2020 rotating mounting plate for false ceiling applications

### Cable Entry

Two 0.875-inch (2.22 cm) diameter conduit knockouts on front and rear of back box

### Security

Two tamper-resistant screws (hollow Allen wrench supplied)

\*Assumes lens is fully extended.

## GENERAL

### Construction

#### Body

0.047-inch (1.19 mm) thick, seam-welded 18 gauge cold rolled steel

### Viewing Window

#### Color

0.188-inch (4.8 mm) thick Lexan®

### Environment

White epoxy polyester powder coat

### Unit Weight

#### EH2020

3.5 lb (1.6 kg)

#### E2020

3.9 lb (1.8 kg)

### Shipping Weight

#### EH2020

5.0 lb (2.3 kg)

#### E2020

6.0 lb (2.7 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- UL Listed to Canadian safety standards

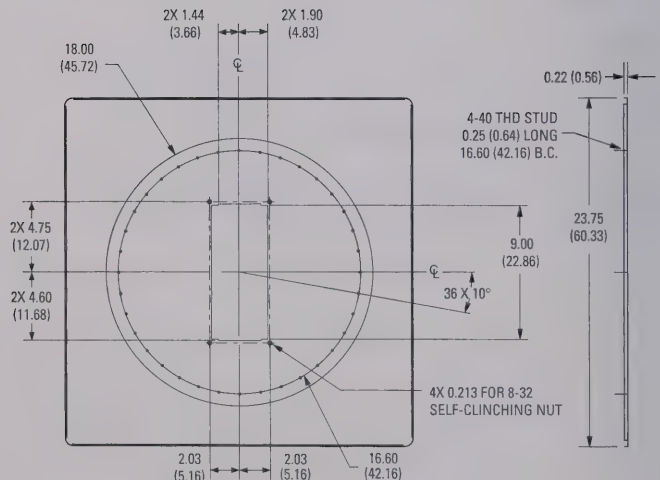
## OPTIONAL ACCESSORIES

### E2020

360° rotating mounting plate; rotates in 10° increments and features "locking" capability to secure enclosure positioning. Replaces 2 ft x 2 ft (61 cm x 61 cm) ceiling tile; can be used in 2 ft x 4 ft (61 cm x 122 cm) ceiling tile with additional T-rail for support. Constructed of aluminum with textured white polyester powder coat finish.



E2020 ROTATING MOUNTING PLATE



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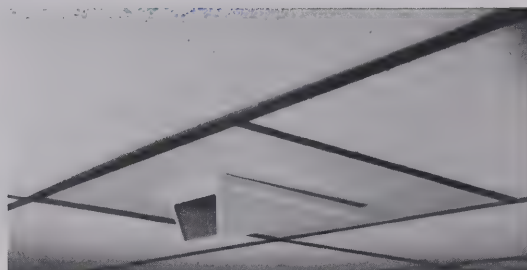
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## EH2100/EH2100P Enclosure INDOOR, IN-CEILING, FOR SINGLE CAMERA

### Product Features

- Low Profile, "Wedge" Style
- Designed for Medium-to-Large Format Cameras
- For Use in Fixed or Dropped (False) Ceilings
- Hinged Door Opens for Convenient Access to Camera
- Select from Riveted or Fully Welded and Sealed Back Box Models



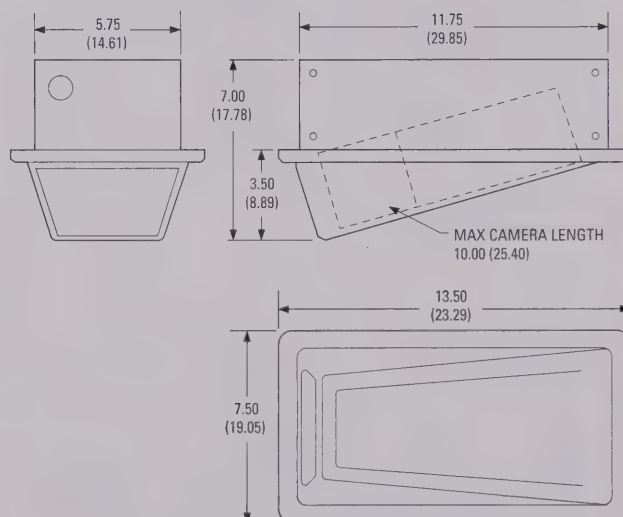
EH2100 MOUNTED IN DROPPED CEILING  
USING E2100 MOUNTING PLATE

The **EH2100** and **EH2100P** are low profile ceiling enclosures designed for use with medium-to-large format cameras. The unobtrusive, compact design complements any business or office decor.

The enclosures are designed for use in fixed or dropped (false) ceilings. The upper section mounted above the ceiling is constructed of aluminum. The **EH2100** has a riveted back box and the **EH2100P** has a fully welded and sealed back box.

Because of its lightweight design, the enclosure can be mounted directly on a ceiling tile without the use of an additional mounting plate. Pelco offers an optional 360-degree rotating mounting plate (**E2100**) for false ceiling applications, which allows the enclosure to be rotated in 10-degree increments to change the viewing area.

The **EH2100** and **EH2100P** are engineered for ease of installation and service. The lower section is hinged to provide convenient access for camera and lens adjustments. The adjustable camera mounting sled allows the camera to be positioned vertically or horizontally, depending on the camera size. A Phillips screw at the front of the enclosure secures the cover.



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DataFAX  
SPEC: 2407  
MANUAL: 24076

C407 / REVISED 10-02



International Organization  
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ENCLOSURES  
INDOOR

## MODELS

EH2100	Low profile ceiling enclosure with riveted back box; for use in fixed or false ceiling applications
EH2100P	Same as EH2100 except has fully welded and sealed back box

**Note:** The EH2100 is also available in a heavy-duty version constructed from steel and aluminum for maximum protection and durability. See HS2100 specification sheet for additional information.

## MECHANICAL

Camera Mounting	Adjustable camera sled capable of supporting a maximum weight of 10 lb (4.53 kg). Sled can be adjusted horizontally or vertically
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 3.0" H x 4.0" W x 10.0" L (7.62 x 10.16 x 25.4 cm)
Ceiling Mounting	Upper section flange-mounted to fixed ceiling or ceiling tile. Ceiling support rails are provided
Cable Entry	Conduit knockouts, EH2100 only; must be drilled for EH2100P
Lock	Phillips screw

\*Assumes lens is fully extended.

## GENERAL

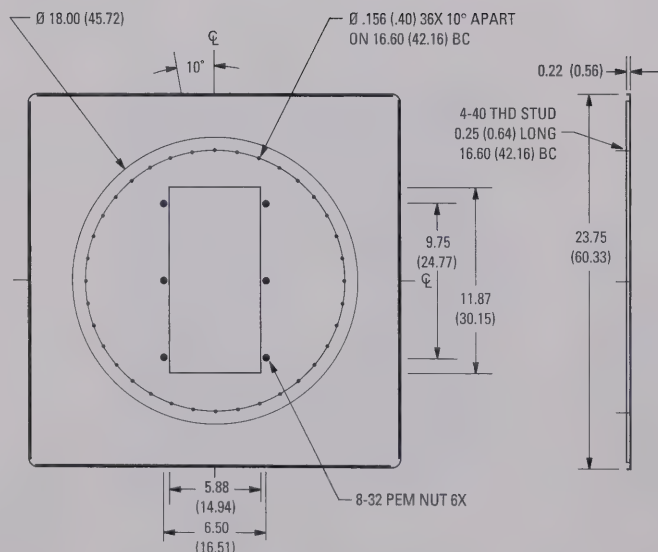
Construction	Upper section Lower section	5052H32 aluminum Vacuum-formed ABS plastic (UL listed material)
Viewing Window		Lucite® SAR (Super Abrasion Resistant) acrylic
Color	Upper section Lower section	Alodine Eggshell white ABS plastic
Environment		Indoor; 32° to 120°F (0° to 49°C)
Unit Weight	EH2100 EH2100P E2100	2.47 lb (1.12 kg) 2.48 lb (1.13 kg) 3.10 lb (1.41 kg)
Shipping Weight	EH2100 EH2100P E2100	4 lb (1.81 kg) 4 lb (1.81 kg) 5 lb (2.26 kg)

## CERTIFICATIONS/RATINGS

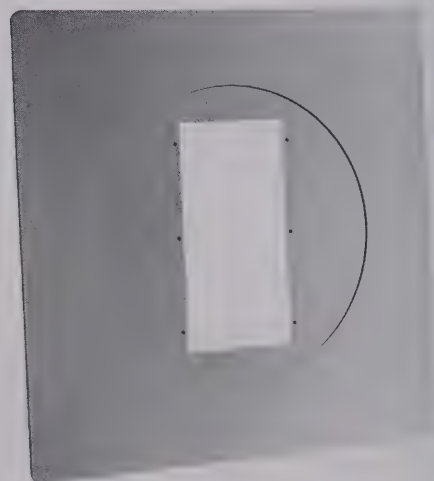
- UL Listed
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

E2100	360° rotating mounting plate; rotates in 10° increments and features locking capability to secure enclosure positioning. Replaces 2 ft x 2 ft (61 cm x 61 cm) ceiling tile; can be used in 2 ft x 4 ft (61 cm x 122 cm) ceiling tile with additional T-rail for support. Constructed of aluminum with textured white polyester powder coat finish.
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E2100 ROTATING MOUNTING PLATE



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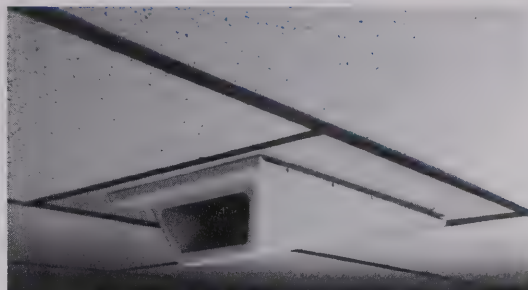


## EH1000 Enclosure

### INDOOR, IN-CEILING, FOR SINGLE CAMERA

#### Product Features

- Low Profile, Large "Wedge" Style
- Tamper Resistant
- Designed for Use with Large Format Cameras
- Can Be Installed in Fixed or Dropped (False) Ceilings
- Hinged Door Opens for Convenient Access to Camera



EH1000 MOUNTED IN DROPPED CEILING  
USING E1003 MOUNTING PLATE

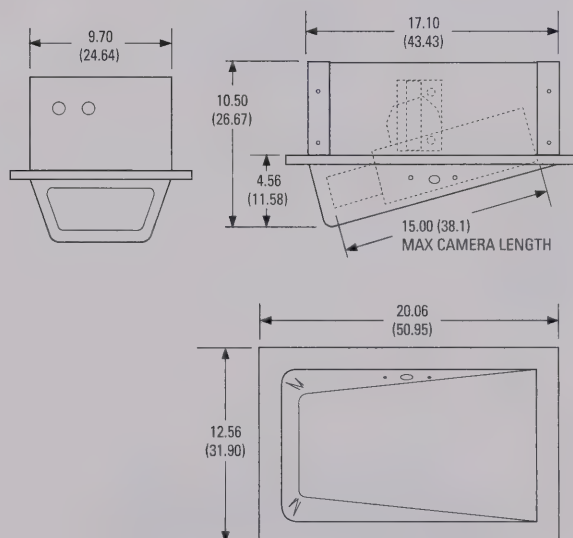
The **EH1000** is a low profile ceiling enclosure for use with large format cameras. The unobtrusive, streamlined design compliments any business or office decor.

The **EH1000** is designed for use in fixed or dropped (false) ceiling and has a riveted back box constructed of aluminum.

An optional rotating mounting plate (**E1003**) is available for dropped ceiling applications. The **E1003** is easily rotated in 10-degree increments and features a locking capability to secure enclosure positioning.

The **EH1000** is engineered for ease of installation and service. The lower section is hinged to provide convenient access for camera and lens adjustments. The upper section has generous interior dimensions, allowing for additional camera angle adjustments. The enclosure is equipped with a tamper-resistant lock for security protection. Cable entry is through conduit knockouts.

The **EH1000** and **E1003** are manufactured with a white textured finish to provide a more unobtrusive appearance.



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DataFAX  
SPEC: 2401  
MANUAL: 24016

C401 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

EH1000 Low profile ceiling enclosure

## MECHANICAL

Camera Mounting Adjustable bracket capable of supporting a maximum of 10 lb (4.53 kg)

Maximum Camera and Lens Size Accepts camera and lens combinations\* (including BNC connector) up to: 4.50" H x 6.50" W x 15.00" L (11.43 x 16.51 x 38.10 cm)

Ceiling Mounting Upper section flange-mounted to fixed ceiling or E1003 rotating mounting plate for false ceilings

Cable Entry Conduit knockouts on upper back box; two on each end

Lock Key lock

\*Assumes lens is fully extended.

## GENERAL

Construction  
Upper section 5052H32 aluminum  
Lower section Vacuum-formed ABS plastic  
Viewing Window Lucite® SAR (Super Abrasion Resistant) acrylic

Color  
Upper section Alodine  
Lower section White textured  
Environment Indoor; 32° to 120°F (0° to 49°C)

Unit Weight  
EH1000 5.16 lb (2.34 kg)  
E1003 3.1 lb (1.41 kg)

Shipping Weight  
EH1000 8 lb (3.6 kg)  
E1003 5 lb (2.25 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 1 standards

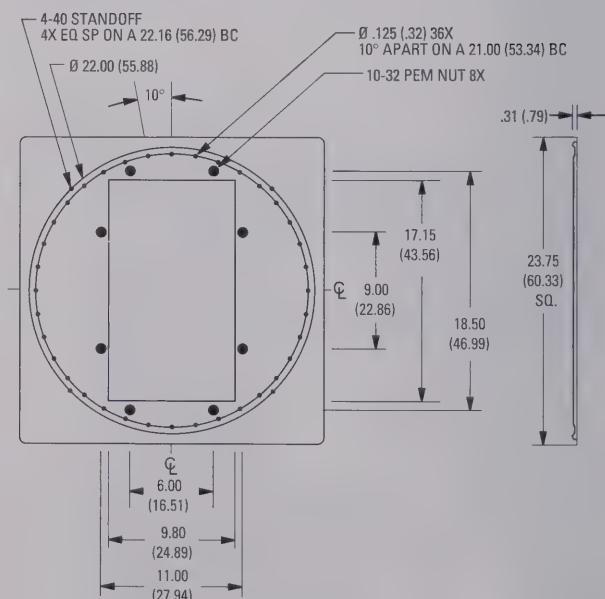
## OPTIONAL ACCESSORIES

E1003 360° rotating mounting plate; rotates in 10° increments and features locking capability to secure enclosure positioning. Replaces 2 ft x 2 ft (61 cm x 61 cm) ceiling tile; can be used in 2 ft x 4 ft (61 cm x 122 cm) ceiling tile with additional T-rail for support. Constructed of aluminum with textured white polyester powder coat finish.

EH664004COMP Replacement lock with two keys.



E1003 ROTATING MOUNTING PLATE



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

E1003 DIMENSION DRAWING



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Indicates change or addition.

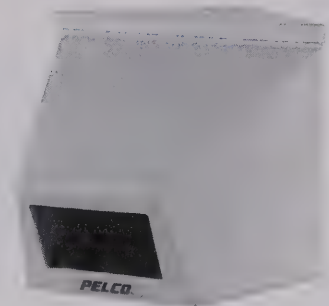
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## EH2400/HS2400 Enclosure

### INDOOR, SECURITY RATED, CORNER MOUNT

#### Product Features

- Aluminum Construction (EH2400); Steel Construction (HS2400)
- Tamper Resistant
- Adjustable Camera Mount
- Flush Ceiling or Mid-Wall Mounting
- Ideal for Today's Smallest Box Cameras
- Attractive, Rugged Powder Coat Finish

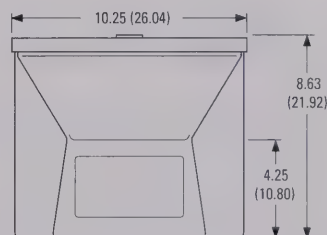
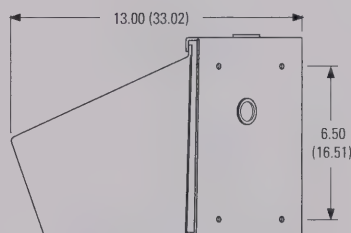
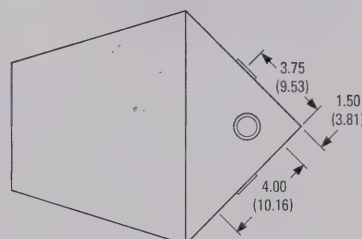


The **EH2400** and **HS2400** enclosures are designed to provide low cost, tamper-resistant, corner mounting for fixed camera applications. They can be mounted flush against a ceiling, or placed mid-wall in high ceiling applications, without compromising enclosure integrity.

The smaller frontal area and reduced overall size create an unobtrusive enclosure ideal for today's smaller cameras. The **EH2400** and **HS2400** will accommodate Pelco box cameras with vari-focal lenses that do not exceed eight inches in total length.

The **HS2400** is constructed of heavy gauge steel and features a half-inch thick, impact-resistant Lexan® window; the **EH2400** is constructed from aluminum and has a 3/16-inch thick Lexan® window. Both enclosures have tamper-resistant button-head screws which prevent them from being opened by unauthorized personnel.

Three conduit knockouts allow wires to be delivered from the wall (either side) or ceiling.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX

SPEC: 21468

MANUAL: 214686 (EH2400), 214706 (HS2400)

C1468 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

EH2400	Indoor enclosure; security rated, corner mount, aluminum
HS2400	Indoor enclosure; security rated, corner mount, steel

## MECHANICAL

Camera Mounting	Adjustable tilt table
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to 4.0" H x 4.0" W x 8.0" L (10.16 x 10.16 x 20.32 cm)
Viewing Window	
EH2400	0.187-inch (4.76 mm) thick Lexan®
HS2400	0.50-inch (12.7 mm) thick Lexan®
Viewing Window Area	4.25" W x 2.56" H (10.8 x 6.50 cm)
Cable Entry	0.875-inch (2.22 cm) diameter or 1.125-inch (2.86 cm) diameter knockout access through rear walls and top
Enclosure Mounting	Eight 0.25-inch (.64 cm) diameter openings on protected rear surfaces
Security	Tamper-resistant button-head screws (hollow Allen wrench supplied)

\*Assumes lens is fully extended.

## GENERAL

Construction	
EH2400	0.125-inch (3.175 mm) thick aluminum
HS2400	0.134-inch (3.40 mm) formed, 10-gauge steel
Finish	Gray polyester powder coat
Environment	Indoor
Unit Weight	
EH2400	6.57 lb (2.98 kg)
HS2400	18.23 lb (8.27 kg)
Shipping Weight	
EH2400	9 lb (4.08 kg)
HS2400	20 lb (9.06 kg)



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## EH2500 Series Enclosure

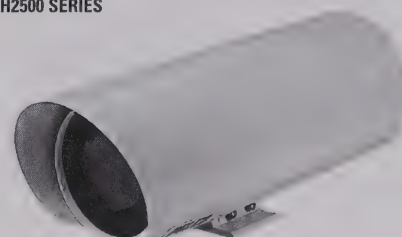
### OUTDOOR, RAIN- AND DUSTPROOF

#### Product Features

- Designed for Maximum Rain Protection
- Dustproof
- Compact, Lightweight
- Aluminum Construction
- Meets NEMA Type 4 and IP66 Standards
- Accepts Cameras with Fixed Focal Length or Motorized Zoom Lenses
- Optional Accessories Include Sun Shroud and Dual-Element Heater/Defroster



EH2500 SERIES



ENCLOSURE WITH SUN SHROUD

The enclosures of the **EH2500 Series** are rain- and dustproof to protect CCTV cameras from adverse environmental conditions.

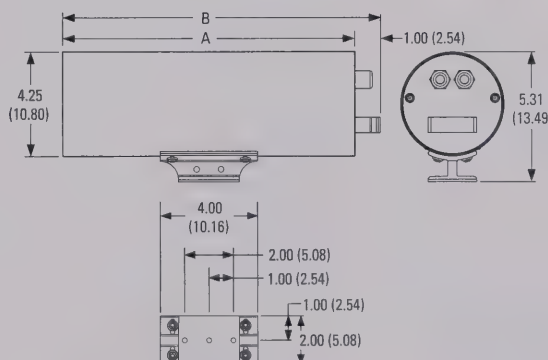
Constructed from aluminum, the enclosures are compact and lightweight. They can be installed on fixed mounts or pan/tilt units.

The **EH2500 Series** can accommodate a variety of cameras with fixed focal length or motorized zoom lenses. The enclosures have an outside diameter of 4.25 inches (10.80 cm) and are available in three lengths: 8 inches (20.32 cm), 12 inches (30.48 cm), and 15 inches (38.10 cm).

Each model features a sled for camera mounting and a T-handle on the rear plate to assist in removing the plate during installation and servicing.

Optional accessories include a sun shroud. The heater has two elements so that it can operate as a heater and defroster. When the temperature drops below 70°F (21°C), one element turns on for defogging. When the temperature falls below 40°F (4°C), the second element turns on for defrosting.

Cable entry is through two adjustable cable glands located conveniently on the rear plate.



	A	B
EH2508	8.00 (20.32)	9.00 (22.86)
EH2512	12.00 (30.48)	13.00 (33.02)
EH2515	15.00 (38.10)	16.00 (40.64)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

ENCLOSURES,  
OUTDOOR



DataFAX  
SPEC: 21473  
MANUAL: 214736

C1473 / REVISED 10-02

IP66



International Organization  
for Standardization,  
Registered ISO 9001



## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Defroster	Blower	Max. Power Consumption
EH2508	•							
EH2508-1		•			•	•		15W
EH2508-2			•		•	•		15W
EH2508-3				•	•	•		15W
EH2512	•							
EH2512-1		•			•	•		15W
EH2512-2			•		•	•		15W
EH2512-3				•	•	•		15W
EH2515	•							
EH2515-1		•			•	•		15W
EH2515-2			•		•	•		15W
EH2515-3				•	•	•		15W

## MECHANICAL

Camera Mounting	Multiple mounting holes on removable camera sled
Latching	Two captivated screws
Maximum Camera/Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: EH2508 6.25" L x 2.75" W x 2.75" H (15.88 x 6.99 x 6.99 cm) EH2508-1/-2/-3 5.25" L x 2.75" W x 2.75" H (13.34 x 6.99 x 6.99 cm) EH2512 10.25" L x 2.75" W x 2.75" H (26.04 x 6.99 x 6.99 cm) EH2512-1/-2/-3 9.25" L x 2.75" W x 2.75" H (23.50 x 6.99 x 6.99 cm) EH2515 13.25" L x 2.75" W x 2.75" H (33.66 x 6.99 x 6.99 cm) EH2515-1/-2/-3 12.25" L x 2.75" W x 2.75" H (31.12 x 6.99 x 6.99 cm)
Viewing Window	0.375" (0.95 cm) thick Lexan®
Viewing Window Area	
Basic models	3.25" (8.25 cm) diameter
-1/-2/-3 models	2.50" (6.35 cm) diameter
Cable Entry	Two adjustable 1/2-NPT liquid-tight glands

\*Assumes lens is fully extended.

## ELECTRICAL

Input Voltage	120, 24, or 230 VAC for heater
Connector	4-position terminal block
Heater	120 VAC, 24 VAC, 230 VAC; 15 W Dual-element heater is thermostatically controlled. Defroster; activates on at 70°F (21°C), off at 85°F (29°C) Heater; activates on at 40°F (4°C), off at 67°F (19°C)

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Indoor/outdoor -50° to 122°F (-46° to 50°C)
Weight	Unit Shipping
EH2508	2.95 lb (1.34 kg) 5.0 lb (2.27 kg)
EH2508-1/-2/-3	3.10 lb (1.41 kg) 5.0 lb (2.27 kg)
EH2512	3.75 lb (1.70 kg) 6.0 lb (2.72 kg)
EH2512-1/-2/-3	3.90 lb (1.77 kg) 6.0 lb (2.72 kg)
EH2515	4.63 lb (2.10 kg) 7.0 lb (3.18 kg)
EH2515-1/-2/-3	4.83 lb (2.19 kg) 7.0 lb (3.18 kg)

## OPTIONAL ACCESSORIES

EH25/8104ORKIT	O-ring service/repair kit; includes two O-rings, one tube O-ring lubrication, and two desiccant bags
SS2508	Sun shroud for EH2508 series; reduces internal temperature approximately 10-15°F (6-10°C)
SS2512	Sun shroud for EH2512 series
SS2515	Sun shroud for EH2515 series

## CERTIFICATIONS/RATINGS

- CE, Class B (all except 120 VAC models)
- Meets NEMA Type 4 standards
- Meets IP66 standards

## RECOMMENDED MOUNTS

<b>Ceiling/Pedestal</b>	EM1009U, EM1015U, EM3000*	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.12 kg) Ceiling J-mount; maximum load 20 lb (9.07 kg)
<b>Wall</b>	EM1450, EM2400*	Light duty wall mount; maximum load 20 lb (9.07 kg) Light duty wall mount; maximum load 20 lb (9.07 kg)
<b>Pipe/Pole</b>	EM1109, EM2000, EM2200	Medium duty pedestal mount for horizontal or vertical pipe/pole applications; maximum load 40 lb (18.12 kg) Medium duty mount for vertical pipe/pole applications; maximum load 40 lb (18.12 kg) Medium duty mount for horizontal pipe/pole applications; maximum load 40 lb (18.12 kg)

\*These mounts are recommended for **indoor** use only.



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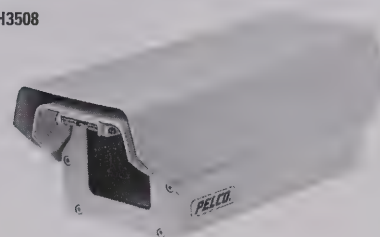
## EH3508 Series Enclosure OUTDOOR, SMALL

### Product Features

- Low Cost
- Small, Contemporary Design
- Forward-Opening Hinged Lid
- Rear Link-Lock Latch
- Die-Cast and Extruded Aluminum Construction
- Designed for Indoor/Outdoor Applications
- Easy Access for Servicing and Installation
- Cable Entry Glands and Mounting Holes on Bottom of Enclosure
- Factory-Installed Low Power Heater-Defroster Models Available



EH3508



ENCLOSURE WITH SUN SHROUD

The **EH3508 Series** are indoor/outdoor, low cost camera enclosures constructed from die cast and extruded aluminum.

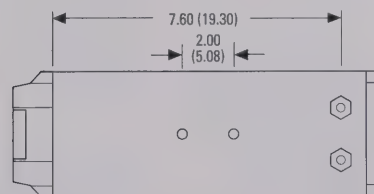
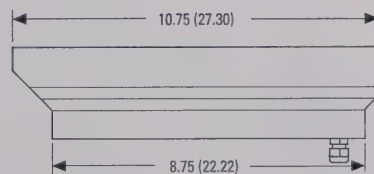
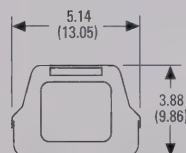
The **EH3508 Series** is the smallest of our outdoor enclosures and can be used with cameras having fixed focal length or motorized zoom lenses (with or without auto iris operation).

The enclosure features a front hinged lid, two adjustable (PG13.5) cable glands on the bottom, and a rear link-lock latch that can be used with a padlock of suitable size for applications requiring additional security.

Field-installed options for the **EH3508** include heater-defroster and sun shroud. Power consumption of heater and defroster is 13 watts.

These enclosures can also be factory ordered with a low power 24 VAC, 120 VAC, or 230 VAC heater-defroster for applications where high humidity or low temperatures are prevalent. Factory-installed heater is thermostatically controlled to activate ON at 50°F (10°C) and OFF at 80°F (27°C); defroster operates in continuous duty mode.

The **EH3508** is ideal for small cameras and fixed mount applications. It can also be used with our PT270 Series or PT280-24P pan/tilt as well as our PS20 Series scanner.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ENCLOSURES,  
OUTDOOR



**DataFAX**  
**SPEC:** 21435  
**MANUAL:** 24786

C1435 / REVISED 10-03



U.S. Patent #307,915

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Defroster	Blower	Max. Power Consumption
EH3508	•							
EH3508-1		•			•	•		13W
EH3508-2			•		•	•		13W
EH3508-3				•	•	•		13W

## MECHANICAL

Camera Mounting	Multiple holes on adjustable camera sled; camera sled mounts in threaded strip for easier removal and can be inverted for additional camera elevation
Cable Entry	Two PG13.5 compression glands on bottom; maximum cable diameter 0.47-inch (1.19 cm)
Cable Entry Holes	0.875-inch (2.22 cm) diameter; will accept 0.5-inch (1.27 cm) conduit fitting when compression gland is removed
Latch	Link-lock No. 3, stainless steel; can be secured with padlock (not supplied)

## ELECTRICAL

Input Voltage	EH3508-1 120 VAC, 50/60 Hz EH3508-2 24 VAC, 50/60 Hz EH3508-3 230 VAC, 50/60 Hz
Connectors	One 10-position terminal block for input wiring

## GENERAL

Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 2.87" W x 3.00" H (7.28 x 7.62 cm) and the following length: 6.80" (17.27 cm) 5.00" (12.70 cm) 0.187-inch (4.75 mm) thick Lexan®
EH3508	6.80" (17.27 cm)
EH3508-1/-2/-3	5.00" (12.70 cm)
Viewing Window	0.187-inch (4.75 mm) thick Lexan®
Viewing Window Area	
EH3508	2.25" H x 2.63" W (5.71 x 6.68 cm)
EH3508-1/-2/-3	2-inch (5.08 cm) diameter circle
Construction	Extruded and die-cast aluminum
Finish	Gray polyester powder coat
Environment	Indoor/outdoor -10° to 120°F (-23° to 49°C)
Unit Weight	
EH3508	2.67 lb (1.20 kg)
EH3508-1/-2/-3	2.76 lb (1.25 kg)
Shipping Weight	
EH3508	4 lb (1.81 kg)
EH3508-1/-2/-3	4 lb (1.81 kg)

\*Assumes lens is fully extended.

## CERTIFICATIONS/RATINGS

- CE compliant (models EH3508 and EH3508-2)

## OPTIONAL ACCESSORIES

HD35-1	Heater and defroster kit, 120 VAC, 13 watts. Thermostatically controlled heater activates on at 50°F (10°C); off at 80°F (27°C). Defroster operates continuously.
HD35-2	Same as HD35-1 except 24 VAC.
HD35-3	Same as HD35-1 except 230 VAC.
SS3508	Sun shroud; reduces internal temperature by approximately 10-15°F (6-10°C).

## RECOMMENDED MOUNTS

<b>Pedestal</b>	EM1009U, EM1015U	Medium duty pedestal mount; maximum load 40 lb (18.12 kg)
<b>Wall</b>	EM1450	Light duty wall mount; maximum load 20 lb (9.07 kg)
	EM2400**	Light duty wall mount; maximum load 20 lb (9.06 kg)
	EM1900U	Medium duty wall mount; maximum load 40 lb (18.12 kg)
<b>Pipe/Pole</b>	EM1109	Medium duty pedestal mount for horizontal or vertical pipe/pole applications; maximum load 40 lb (18.12 kg)
	EM2000	Medium duty mount for vertical pipe/pole applications; maximum load 40 lb (18.12 kg)
	EM2200	Medium duty mount for horizontal pipe/pole applications; maximum load 40 lb (18.12 kg)

\*\*For indoor use only.

## RECOMMENDED PAN AND TILTS

PT270 Series	Light duty, indoor pan/tilt
PT280-24P	Light duty, indoor pan/tilt with prewired feedthrough
PS20 Series	Medium duty, indoor/outdoor scanner

Indicates change or addition.



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## EH3512/EH3515 Series Enclosure

### OUTDOOR, SMALL

#### Product Features

- Low Cost
- Small, Contemporary Design
- Die-Cast and Extruded Aluminum Construction
- Forward-Opening Hinged Lid
- Rear Link-Lock Latch
- Cable Entry Glands and Mounting Holes on Bottom of Enclosure
- Designed for Indoor/Outdoor Applications
- Easy Access for Servicing and Installation
- Models Available with Factory-Installed Low Power Heater, Blower and Defroster, or with Heater and Defroster



EH3512 ENCLOSURE WITH SUN SHROUD  
AND EM3512 MOUNT

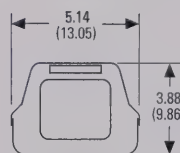
The **EH3512/EH3515 Series** are indoor/outdoor, low cost camera enclosures constructed from die cast and extruded aluminum. The **EH3512** has a lower body length of 12.75 inches (32.38 cm) and the **EH3515** has a lower body length of 15.75 inches (40.00 cm).

These enclosures are for use with cameras having fixed focal length lenses or motorized zoom lenses (with or without auto iris operation).

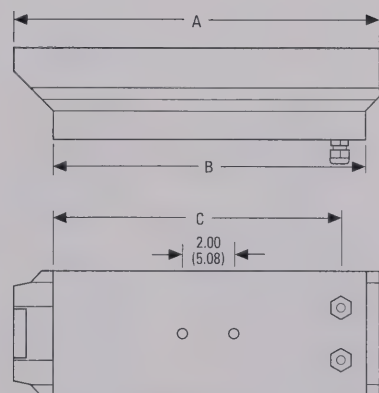
The front hinged lid provides easy access to the removable camera sled. Two adjustable (PG13.5) glands on the bottom of the enclosure allow for easy installation of the power and video cables. The rear link-lock latch can be used with a padlock of suitable size to secure the enclosure.

Field-installed options include heater-defroster, blower, and sun shroud. The enclosures can also be factory-ordered with a low power 24V, 120V, or 230V heater-defroster and blower or heater-defroster only.

The **EH3512** and **EH3515** are ideal for small-to-medium cameras and can be mounted to either our PT270/PT280 Series (indoor) or PT570/PT680 Series (outdoor) pan/tilts, or any compatible mount.



	EH3512	EH3515
A	14.75 (37.47)	17.75 (45.09)
B	12.75 (32.38)	15.75 (40.00)
C	11.25 (28.57)	14.25 (36.20)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ENCLOSURES  
OUTDOOR



DataFAX  
SPEC: 2478  
MANUAL: 24786

C478 / REVISED 10-03



U.S. Patent #307,915

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Defroster	Blower	Max. Power Consumption
EH3512	•							
EH3512-1		•			•	•	•	17W
EH3512-2			•		•	•	•	15W
EH3512-3				•	•	•	•	22W
EH3512-1HD		•			•	•		13W
EH3512-2HD			•		•	•		13W
EH3512-3HD				•	•	•		13W
EH3515	•							
EH3515-1		•			•	•	•	27W
EH3515-2			•		•	•	•	25W
EH3515-3				•	•	•	•	32W
EH3515-1HD		•			•	•		23W
EH3515-2HD			•		•	•		23W
EH3515-3HD				•	•	•		23W

## MECHANICAL

### Camera Mounting

Multiple holes on adjustable camera sled; camera sled can be inverted for additional camera elevation

### Maximum Camera Size

Accepts camera and lens combinations\* (including BNC connector) up to 2.87" W x 3.00" H (7.28 x 762 cm) and the following length:

EH3512	10.25" (26.03 cm)
EH3512-1/-2/-3	9.00" (22.86 cm)
EH3512-1HD/-2HD/-3HD	10.00" (25.40 cm)
EH3515	13.25" (33.66 cm)
EH3515-1/-2/-3	12.00" (30.48 cm)
EH3515-1HD/-2HD/-3HD	13.00" (33.02 cm)

### Viewing Window

0.187-inch (4.76 mm) thick, Lexan®

### Viewing Window Area

EH3512/EH3515	2.25" H x 2.63" W (5.71 x 6.68 cm)
All Other Models	2-inch (5.08 cm) diameter circle

### Cable Entry

Two PG13.5 compression glands on bottom; 0.47-inch (1.19 cm) maximum cable diameter

### Cable Entry Holes

0.875-inch (2.22 cm) diameter; will accept 0.5-inch (1.27 cm) conduit fitting when compression gland is removed

### Latch

Link-lock No. 3, stainless steel; can be secured with padlock (not supplied)

\*Assumes lens is fully extended.

## GENERAL

### Construction

Extruded and die-cast aluminum

### Finish

Gray polyester powder coat

### Environment

Indoor/outdoor -10° to 120°F (-23° to 49°C)

### Unit Weight

EH3512	3.49 lb (1.58 kg)
EH3515	4.10 lb (1.86 kg)

### Shipping Weight

Basic Model	
EH3512	5 lb (2.26 kg)
EH3515	5 lb (2.36 kg)

### All Others

3.85 lb (1.75 kg)
4.47 lb (2.03 kg)
All Others
5 lb (2.26 kg)
6 lb (2.72 kg)

## CERTIFICATIONS/RATINGS

- CE compliant (EH3512, EH3512-2, EH3512-2HD, EH3515, EH3515-2, and EH3515-2HD)

## OPTIONAL ACCESSORIES

### Blower Kit

BK3512-1 For EH3512/EH3515; continuous duty, 120 VAC, 4W, 10 cfm at 60 Hz

BK3512-2 For EH3512/EH3515; continuous duty, 24 VDC (AC rectified), 2W, 19 cfm at 50/60 Hz

BK3512-3 For EH3512/EH3515; continuous duty, 230 VAC, 9W, 8 cfm at 50 Hz

### Heater-Defroster

HD35-1\*\* For EH3512 only; 120 VAC, 13W.

HD35-2\*\* Same as HD35-1 except 24 VAC

HD35-3\*\* Same as HD35-1 except 230 VAC

HD3515-1\*\* For EH3515 only; 120 VAC, 23W.

HD3515-2\*\* Same as HD3515-1 except 24 VAC

HD3515-3\*\* Same as HD3515-1 except 230 VAC

### Sun Shroud

SS3512 For EH3512 Series enclosure

SS3515 For EH3515 Series enclosure

\*\*Thermostatically controlled heater activates on at 50°F (10°C); off at 80°F (27°C). Defroster operates continuously.

## RECOMMENDED MOUNTS

### Pedestal

EM1009U Medium duty pedestal mount; maximum load 40 lb (18.14 kg)

EM1015U Medium duty pedestal mount; maximum load 40 lb (18.14 kg)

MM22 Medium duty pedestal mount; maximum load 40 lb (18.14 kg)

### Wall

EM1450 Light duty wall mount; maximum load 20 lb (9.07 kg)

EM2400 Light duty wall mount; maximum load 20 lb (9.07 kg)

EM3512 Wall mount with feedthrough for EH3512, EH3512-2 and EH3512-2HD enclosures only

EM1900U Medium duty wall mount; maximum load 40 lb (18.14 kg)

EM22 Medium duty wall mount; maximum load 40 lb (18.14 kg)

### Pipe/Pole

EM1109, EM2000, EM2200 Medium duty mounts for pipe/pole applications; maximum load 40 lb (18.14 kg)

## RECOMMENDED PAN AND TILTS

PT270 Series

Light duty, indoor pan/tilt

PT280-24P

Light duty, indoor pan/tilt with prewired feedthrough

PT570 Series

Medium duty, indoor/outdoor pan/tilt

PS20 Series

Medium duty, indoor/outdoor scanner

Indicates change or addition.



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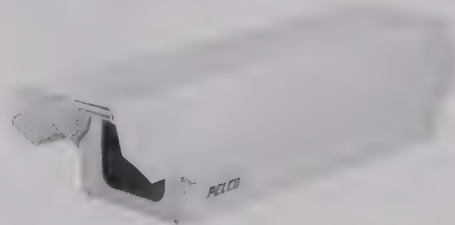
## EH4700 Series Enclosure OUTDOOR, MEDIUM

### Product Features

- Designed for Indoor/Outdoor Applications; For Use with Fixed Mount or Pan/Tilt
- Die-Cast and Extruded Aluminum Construction
- Gas-Spring-Assisted Forward-Opening Lid
- Cable Entry Glands and Mounting Holes Located on Bottom of Enclosure
- Special Options Include 120 VAC Outlet and Preset Lens Wiring Harness



EH4718



ENCLOSURE WITH SUN SHROUD

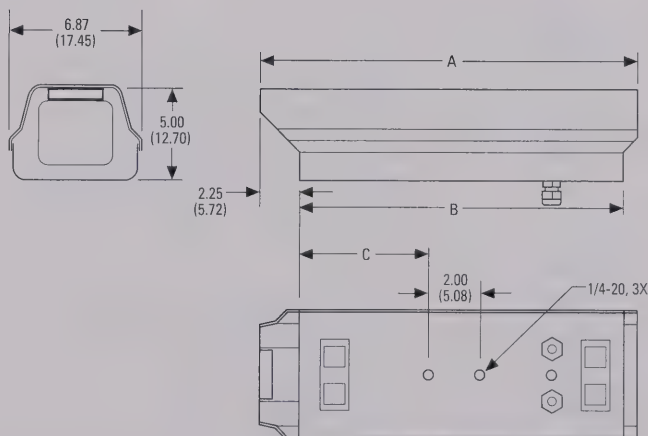
The **EH4700 Series** are indoor/outdoor enclosures constructed from die cast and extruded aluminum. They are available in 18-inch (45.72 cm) (**EH4718**) or 22-inch (55.88 cm) (**EH4722**) lengths.

The **EH4700 Series** is designed to accept larger format cameras with either fixed focal length lenses or motorized zoom lenses. The camera sled is removable and can be inverted to accommodate various camera and lens combinations.

The enclosure opens from the rear by unlatching the rear-mount, link-lock latch. The forward-opening lid allows for maximum accessibility during installation/servicing and can be removed, if necessary. A unique gas spring securely holds the lid when fully opened. If desired, the link-lock latch can be secured with a padlock of suitable size for additional security.

The **EH4700 Series** is available with a full complement of factory- and field-installed accessories which include blower, heater, window defroster, sun shroud, thermal insulation, 120 VAC electrical outlet, and preset position lens wiring harness.

The **EH4700 Series** can be used in fixed mount applications or mounted to a medium duty pan/tilt, such as our PT570 Series.



	DIM.	MODEL
A	21.2 (53.84)	EH4718
	25.2 (64.00)	EH4722
B	18.3 (46.48)	EH4718
	22.3 (56.64)	EH4722
C	7.00 (17.78)	EH4718
	9.00 (22.86)	EH4722

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21405  
MANUAL: 214056

C1405 / REVISED 10-02



U.S. Patent #307,915

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Defroster	Blower	Max. Power Consumption*
EH4718	•							
EH4718-1		•			•		•	68W
EH4718-2			•		•		•	58W
EH4718-3				•	•		•	63W
EH4722	•							
EH4722-1		•			•		•	68W
EH4722-2			•		•		•	58W
EH4722-3				•	•		•	63W

\*If optional defroster is used, add 15W to consumption.

## MECHANICAL

Cable Entry	Two PG13.5 compression glands on bottom; 0.47-inch (1.19 cm) maximum cable diameter
Cable Entry Holes	0.875-inch (2.22 cm) diameter; will accept 0.5-inch (1.27 cm) conduit fitting when compression gland is removed
Camera Mounting	Removable camera sled; can be inverted
Rear Latch	Link-lock, No. 3, stainless steel; can be secured with padlock (not supplied)

## ELECTRICAL

Input Voltage	24 VAC, 120 VAC or 230 VAC, 50/60Hz.
Electrical Connection	Connectors for power input, lens, camera, and accessories (-1/-2/-3 models only).
(-1/-2/-3 models only)	Heater/defroster activates on at 42-58°F (6-14°C) and off at 72-88°F (22-31°C). Blower activates on at 77-93°F (25-34°C) and off at 62-78°F (17-26°C).

## GENERAL

Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to:
EH4718	17.0" L x 5.5" W x 4.25" H (43.18 x 13.97 x 10.795 cm)
EH4718-1/-2/-3	13.0" L x 4.75" W x 4.25" H (33.02 x 12.07 x 10.795 cm)
EH4722	21.0" L x 5.5" W x 4.25" H (53.34 x 13.97 x 10.795 cm)
EH4722-1/-2/-3	17.0" L x 4.75" W x 4.25" H (43.18 x 12.07 x 10.795 cm)
Viewing Window	0.25-inch (6.35 mm) thick Lexan®
Viewing Window Area	3.50" H x 4.00" W (8.89 x 10.16 cm)
Construction	Die-cast, extruded, and sheet aluminum
Finish	Gray polyester powder coat
Environment	Indoor/outdoor; -10° to 120°F (-23° to 49°C)
Weight	Unit Shipping
EH4718	7.25 lb (3.28 kg) 9 lb (4.07 kg)
EH4718-1/-2/-3	8.5 lb (3.85 kg) 10 lb (4.53 kg)
EH4722	8.5 lb (3.85 kg) 10 lb (4.53 kg)
EH4722-1/-2/-3	9.75 lb (4.42 kg) 12 lb (5.44 kg)

\*Assumes lens is fully extended.

## CERTIFICATIONS/RATINGS

- CE compliant (models EH4718/-2/-3 and EH4722/-2/-3 only)
- UL Listed (except 230 VAC models)
- Meets NEMA Type 3R standards

## OPTIONAL ACCESSORIES

<b>Blower Kit</b>	BK47-1* 120 VAC, 8W BK47-2* 24 VAC, 8W BK47-3* 230 VAC, 8W
<b>Heater Kit</b>	HK47-1* 120 VAC, 60W HK47-2* 24 VAC, 50W HK47-3* 230 VAC, 55W
<b>Defroster</b>	WD47-1* Window defroster, 120 VAC, 15W WD47-2* Window defroster, 24 VAC, 15W WD47-3* Window defroster, 230 VAC, 15W
<b>Sun Shroud</b>	SS4718 Sun shroud for EH4718 series enclosures SS4722 Sun shroud for EH4722 series enclosures
<b>Other</b>	O/I-PCB Accessory interface board; thermostatically controls heater, blower, and defroster operation (one per enclosure required) O/I-LPP* Preset position lens wiring harness O/I-OUTLET* 120 VAC electrical convenience outlet TI47 Thermal insulation

\*These accessories are factory wired with a plug-in connector for use with the O/I-PCB. The O/I-PCB is included with all -1/-2/-3 models. You must order one O/I-PCB if you are using a basic enclosure (EH4718 or EH4722) with these optional accessories.

## RECOMMENDED MOUNTS

<b>Pedestal</b>	EM1009U, Medium duty pedestal mount; maximum load 40 lb (18.14 kg) EM1015U MM22 Medium duty pedestal mount; maximum load 40 lb (18.14 kg)
<b>Wall</b>	PM2000/ Pedestal mounts; maximum load 125 lb (56.63 kg) PM2010** EM1900U Medium duty wall mount; maximum load 40 lb (18.14 kg) EM22 Medium duty wall mount; maximum load 40 lb (18.14 kg) WM2000** Universal wall mount; maximum load 75 lb (33.97 kg)
<b>Pipe/Pole</b>	EM1109 Medium duty pedestal mount for pipe/pole; maximum load 40 lb (18.14 kg) EM2000, Medium duty mount for pipe/pole applications; maximum load 40 lb (18.14 kg) EM2200
<b>Adapter</b>	AH1000 Manually adjustable pan/tilt head

\*\*Use with AH1000 adjustable head.

## RECOMMENDED PAN/TILT

PT570 Series	Medium duty pan/tilt, 120 or 24 VAC; maximum load 40 lb (18.14 kg)
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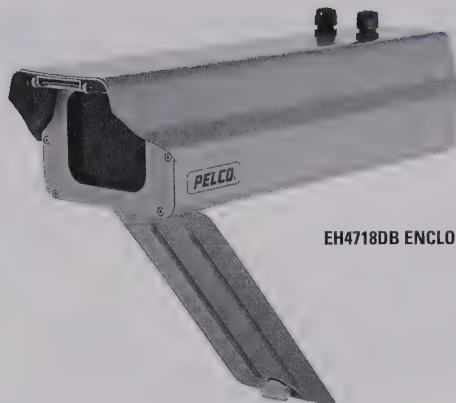


# EH4700DB Series Enclosure

## OUTDOOR, SMALL/MEDIUM, TOP MOUNTING, "DROP" BOTTOM

### Product Features

- Indoor/Outdoor Applications
- All-Aluminum Construction
- Bottom-Opening Access Door
- Factory/Field-Installed Accessories
- Cable Entry Glands and Mounting Holes Located on Top of Enclosure
- Suitable for Mounting in Parking Garages and Under Building Eaves or Installations Where Wall Mounting Is Not Practical



EH4718DB ENCLOSURE

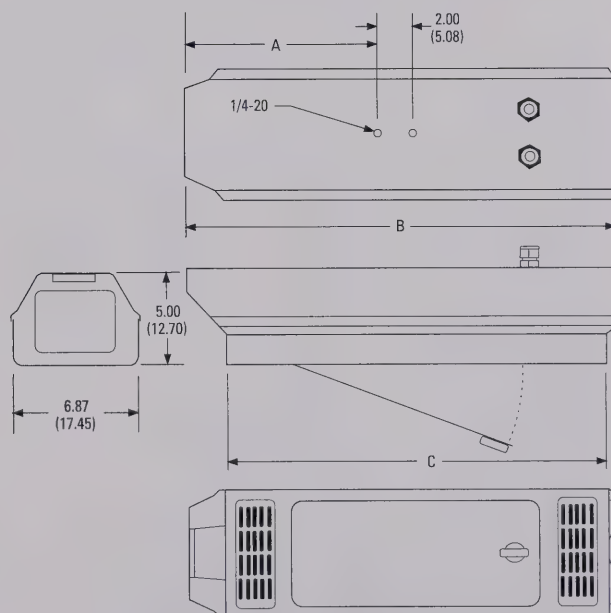
The **EH4700DB Series** are indoor/outdoor enclosures constructed from die cast and extruded aluminum. They are available in 13-inch (33.02 cm) (**EH4712DB**) or 18-inch (45.72 cm) (**EH4718DB**) lengths.

Both enclosures will accept cameras with either fixed focal length lenses or motorized zoom lenses. Models with factory-installed heater and blower feature a prewired PC board with internal electronics to simplify installation and setup of camera and enclosure accessories.

Unlike other enclosures, the **EH4700DB Series** opens from the bottom and the camera sled is attached to the top of the enclosure. Internal adjustments can be made without interfering with the video because the camera remains in its normal viewing position.

Cable entry glands and mounting holes are located on the top of the enclosure, making it ideal for ceiling applications, especially where limited accessibility is a concern.

The **EH4700DB Series** is available with factory-installed heaters and blowers. Optional field-installed accessories include a window defroster, preset positioning lens wiring harness, 120 VAC electrical outlet, and lock kit.



NOTE: EH4712DB SERIES DOES NOT HAVE VENTS IN BOTTOM OF ENCLOSURE.

	EH4712DB	EH4718DB
A	7.25 (18.42)	9.25 (23.50)
B	16.2 (41.15)	21.2 (53.84)
C	13.3 (33.78)	18.3 (46.48)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21446  
MANUAL: 214466

C1446 / REVISED 10-02



U.S. Patent #307,915

International Organization  
for Standardization  
Registered ISO 9001



ENCLOSURES  
OUTDOOR

## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Defroster	Blower	Max. Power Consumption*
EH4712DB	•							
EH4712DB-1		•			•		•	68W
EH4712DB-2			•		•		•	58W
EH4712DB-3				•	•		•	63W
EH4718DB	•							
EH4718DB-1		•			•		•	68W
EH4718DB-2			•		•		•	58W
EH4718DB-3				•	•		•	63W

\*If optional defroster is used, add 15W to consumption.

## MECHANICAL

Cable Entry	Two PG13.5 UL compression glands on lid; maximum cable diameter 0.47 inch (1.19 cm)
Cable Entry Holes	0.875-inch (2.22 cm) diameter; will accept 0.5-inch (1.27 cm) conduit fitting when gland is removed
Camera Mounting	Removable camera sled
Access Door Latch	1/4-turn latch with molded vinyl cap

## ELECTRICAL

Input voltage	24 VAC, 120 VAC, or 230 VAC, 50/60 Hz		
Electrical connection	Connectors for power input, lens, camera, and accessories (-1/-2/-3 models only)		
Power consumption	<u>120 VAC</u>	<u>24 VAC</u>	<u>230 VAC</u>
Heater	60 watts	50 watts	55 watts
Defroster	15 watts	15 watts	15 watts
Blower	8 watts	8 watts	8 watts

## GENERAL

Maximum Camera and Lens Size*	(including BNC connector)
EH4712DB	12.5" L x 3.5" W x 4.0" H (31.75 x 8.89 x 10.16 cm)
EH4712DB-1/-2/-3	8.5" L x 3.5" W x 4.0" H (21.59 x 8.89 x 10.16 cm)
EH4718DB	16.5" L x 3.5" W x 4.0" H (41.91 x 8.89 x 10.16 cm)
EH4718DB-1/-2/-3	12.5" L x 3.5" W x 4.0" H (31.75 x 8.89 x 10.16 cm)
Viewing Window	0.25-inch (6.35 mm) thick Lexan®
Viewing Window Area	3.50" H x 4.00" W (8.89 x 10.16 cm)
Construction	Die-cast, extruded, and sheet aluminum
Environment	Indoor/outdoor -10° to 120°F (-23° to 49°C)
Weight	<u>Unit</u> <u>Shipping</u>
EH4712DB	6.35 lb (2.90 kg) 7 lb (3.17 kg)
EH4712DB-1/-2/-3	7.85 lb (3.56 kg) 9 lb (4.08 kg)
EH4718DB	7.25 lb (3.28 kg) 9 lb (4.08 kg)
EH4718DB-1/-2/-3	8.75 lb (3.96 kg) 10 lb (4.53 kg)

\*Assumes lens is fully extended.

## CERTIFICATIONS/RATINGS

- CE compliant (EH4712DB, EH4712DB-2, EH4712DB-3, EH4718DB, EH4718DB-2 and EH4718DB-3 only)
- Meets NEMA Type 3R standards

## OPTIONAL ACCESSORIES

<b>Window Defroster</b>	WD47-1*	Window defroster and defogger prevents ice buildup or condensation of moisture on window caused by temperature and humidity, 120 VAC, 15W
	WD47-2*	Same as WD47-1 except 24 VAC operation
	WD47-3*	Same as WD47-1 except 230 VAC operation
<b>Other</b>	LK4500	Lock kit
	O/I-LPP	Preset positioning lens wiring harness (for use with -1/-2/-3 models only)
	O/I-OUTLET	120 VAC electrical outlet (for use with -1/-2/-3 models only)

\*Window defroster not for use with basic enclosure (EH4712DB or EH4718DB).

## RECOMMENDED MOUNTS

<b>Ceiling</b>	EM1009U, EM1015U	Medium duty ceiling mount; maximum load 40 lb (18.14 kg)
<b>Wall</b>	EM1900U	Medium duty wall mount; maximum load 40 lb (18.14 kg)
<b>Pipe/Pole</b>	EM1109	Medium duty ceiling/pedestal mount for horizontal pipe or pole applications; maximum load 40 lb (18.14 kg)
	EM2000	Medium duty mount for vertical pipe or pole applications; maximum load 40 lb (18.14 kg) (Mount orientation is reversed when used with EH4718DB Series)

## RECOMMENDED PAN/TILT

### (Inverted Operation Only)

PT570-24P Series	Medium duty indoor/outdoor pan/tilt, 24 VAC; maximum load 40 lb (18.14 kg)
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## EH5700 Series Enclosure

### OUTDOOR, LARGE

#### Product Features

- All-Aluminum Construction
- Gas-Spring-Assisted Forward-Opening Lid
- Cable Entry Glands and Mounting Holes Located on Bottom of Enclosure
- Link-Lock Latches for Security
- Designed for Indoor/Outdoor Applications
- For Use with Fixed Mount or Pan/Tilt
- Special Options Include 120 VAC Outlet, Preset Lens Wiring Harness, and Window Wiper



EH5723



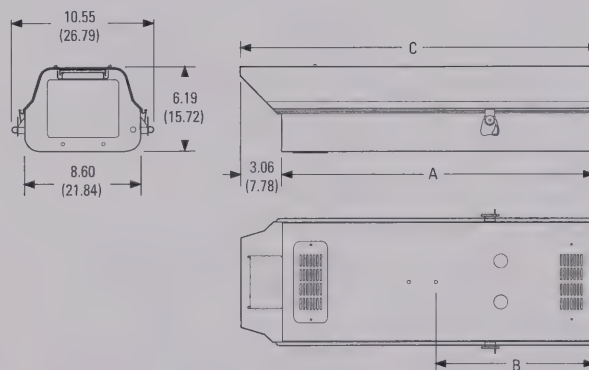
ENCLOSURE WITH SUN SHROUD

The **EH5700 Series** are indoor/outdoor enclosures designed for use with Pelco's medium- and heavy-duty pan/tilts or fixed mounts. Constructed of aluminum and available in a 23-inch (58.42 cm) length (**EH5723**) and 29-inch (73.66 cm) length (**EH5729**), these enclosures are designed to accept larger format cameras with either fixed focal length lenses or motorized zoom lenses.

The enclosure opens from the rear. The forward-opening lid allows for maximum accessibility during installation and when camera and lens adjustments are necessary. A gas spring securely holds the lid when fully opened. The lid is secured with side-mount link-lock latches. If desired, the latches can be secured with a padlock of suitable size for additional security.

All models feature an adjustable camera sled with a built-in elevation block that can be removed and inverted. The **EH5700 Series** enclosures are available with a full complement of accessories which include blower, heater, window defroster, sun shroud, window wiper, preset lens wiring harness, 120 VAC outlet, and thermal insulation.

The **EH5700 Series** can be used in fixed mount applications or mounted to a PT570 Series medium duty pan/tilt or PT1250 Series heavy duty pan/tilt.



MODEL	A	B	C
EH5723	23.00 (58.42)	11.50 (29.21)	26.50 (67.31)
EH5729	29.00 (73.66)	14.50 (36.83)	32.50 (82.55)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21431  
MANUAL: 214316

C1431 / REVISED 10-02



U.S. Patent #307,915

International Organization  
for Standardization,  
Registered ISO 9001





## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Defroster	Blower	Max. Power Consumption*
EH5723	•							
EH5723-1		•			•		•	105W
EH5723-2			•		•		•	60W
EH5723-3				•	•		•	85W
EH5729	•							
EH5729-1		•			•		•	105W
EH5729-2			•		•		•	60W
EH5729-3				•	•		•	85W

\*If optional defroster is used, add 30W to consumption

## ELECTRICAL

Input Voltage	24, 120 or 230 VAC, 50/60 Hz
Electrical Connection	Connectors for power input, lens, camera and accessories (-1/-2/-3 models only)
(-1/-2/-3 models only)	Heater and defroster activate on at 42-58°F (6-14°C) and off at 72-88°F (22-31°C). Blower activates on at 77-93°F (25-34°C) and off at 62-78°F (17-26°C)

## MECHANICAL

Camera Mounting	Removable camera sled; can be inverted
Cable Entry	Two PG13.5 UL glands on bottom of enclosure; 0.47-inch (1.19 cm) maximum cable diameter
Cable Entry Holes	0.875-inch (2.22 cm) diameter; will accept 0.5-inch (1.27 cm) conduit fitting when compression gland is removed
Connectors	
Video	BNC
Camera Sync	BNC
Latches	Link-lock No. 3, stainless steel; can be secured with padlocks (not supplied) EH5723 Series (2), EH5729 Series (4)

## GENERAL

Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to:
EH5723	22" L x 7.5" W x 5.5" H (55.88 x 19.05 x 13.97 cm)
EH5723-1/-2/-3	15.5" L x 6.25" W x 5.5" H (39.37 x 15.88 x 13.97 cm)
EH5729	28" L x 7.5" W x 5.5" H (71.12 x 19.05 x 13.97 cm)
EH5729-1/-2/-3	21.5" L x 6.25" W x 5.5" H (54.61 x 15.88 x 13.97 cm)
Viewing Window	Glass, 0.25-inch (6.35 mm) thick 4.25" H x 5.25" W (10.79 x 13.33 cm)
Construction	Aluminum, 0.080-inch (0.20 cm) thick (body and lid)
Finish	Gray polyester powder coat
Environment	Indoor/outdoor; -10° to 120°F (-23° to 49°C)

\*Assumes lens is fully extended.

Weight	Unit	Shipping
EH5723	11 lb (4.98 kg)	12 lb (5.43 kg)
EH5723-1,-2,-3	13 lb (5.88 kg)	15 lb (6.79 kg)
EH5729	16 lb (7.24 kg)	18 lb (8.15 kg)
EH5729-1,-2,-3	18 lb (8.15 kg)	20 lb (9.06 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE Class A (models EH5723/-2/-3 and EH5729/-2/-3)
- UL Listed (except 230 VAC models)
- UL Listed to Canadian safety standards (except 230 VAC models)
- Meets NEMA Type 3R standards
- U.S. patent 307,915

## OPTIONAL ACCESSORIES

<b>Blower Kit</b>	BK57-1* BK57-2* BK57-3*	Blower kit, 120 VAC, 15W Blower kit, 24 VAC, 10W Blower kit, 230 VAC, 15W
<b>Heater Kit</b>	HK57-1* HK57-2* HK57-3*	Heater kit, 120 VAC, 90W Heater kit, 24 VAC, 50W Heater kit, 230 VAC, 70W
<b>Sun Shroud</b>	SS5723 SS5729	Sun shroud for EH5723 series enclosures Sun shroud for EH5729 series enclosures
<b>Window Defroster</b>	WD57-1* WD57-2* WD57-3*	Window defroster, 120 VAC, 30W Window defroster, 24 VAC, 30W Window defroster, 230 VAC, 30W
<b>Window Wiper</b>	WW5723-1*	Window wiper, EH5723 series, 120 VAC, 15W
	WW5723-2**	Window wiper, EH5723 series, 24 VAC, 15W
	WW5723-3**	Window wiper, EH5723 series, 230 VAC, 15W
	WW5729-1**	Window wiper, EH5729 series, 120 VAC, 15W
	WW5729-2**	Window wiper, EH5729 series, 24 VAC, 15W
	WW5729-3**	Window wiper, EH5729 series, 230 VAC, 15W
<b>Other</b>	O/I-PCB  O/I-LPP* O/I-OUTLET* TI57	Accessory interface board; thermostatically controls heater, blower, and defroster operation (one per enclosure required) Preset position lens wire harness 120 VAC electrical convenience outlet Thermal insulation, EH5723/EH5729 series

\*These accessories are factory wired with a plug-in connector for use with the O/I-PCB. The O/I-PCB is included with all -1/-2/-3 models. You must order one O/I-PCB if you are using a basic enclosure (EH5723 or EH5729) with these optional accessories.

†Factory installed option only; consult factory for availability.

## RECOMMENDED MOUNTS

<b>Pedestal</b>	MM22	Medium duty pedestal mount; maximum load 40 lb (18.14 kg)
	PM2000, PM2010**	Pedestal mount; maximum load 125 lb (56.6 kg)
<b>Wall</b>	EM22	Medium duty wall mount; maximum load 40 lb (18.14 kg)
	WM2000**	Wall mount; maximum load 75 lb (33.97 kg)
<b>Adapter</b>	AH2000	Adjustable head

\*\*Use with AH2000 adjustable head.

## RECOMMENDED PAN/TILTS

PT570 Series	Medium duty pan/tilt, 120 VAC or 24 VAC; maximum load 40 lb (18.14 kg)
PT1250 Series	Heavy duty pan/tilt, 120 VAC or 230 VAC; maximum load 100 lb (45.4 kg)

Indicates change or addition.



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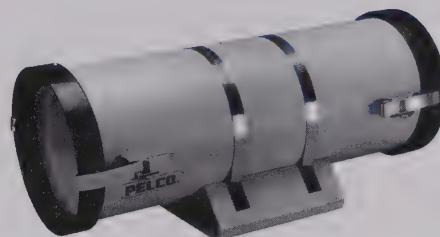


## E706 Series Enclosure

### SPECIALTY, OUTDOOR, DUST-TIGHT

#### Product Features

- 6-Inch Inside Diameter
- Easily Installed and Serviced
- For Use in Small-Particle and Dusty Environments
- Stainless Steel Mounting Straps Allow Enclosure to be Easily Positioned on, or Removed from, Mounting Device
- Options include Heater, Blower, Air Funnel Kit, Sun Shield and Sun Visor
- Aluminum or Stainless Steel Construction



E706-16 ENCLOSURE



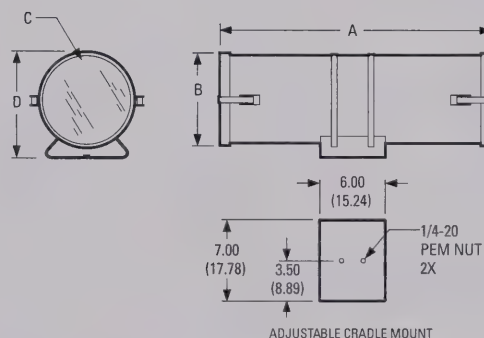
ENCLOSURE WITH SUN SHROUD

The **E706 Series** dust-tight enclosure permits the use of cameras in small-particle and dusty environments. The enclosure is constructed from aluminum and is also available in stainless steel for use in corrosive atmospheres.

The enclosure is engineered for ease of installation and serviceability. Spring clip fasteners permit quick removal of the front and rear plates and have security features for using padlocks and safety wire for additional security protection. The camera is mounted on a removable camera sled for easy access to electrical connections, including those for accessory equipment. Cable entry is through two adjustable cable glands located conveniently on the rear plate.

Accessories to help maintain proper operating temperature within the enclosure under many conditions include purge fittings, heater, blower, air funnel, sun shroud and sun visor.

The **E706 Series** can be used in fixed mount applications or with a medium-duty pan/tilt, such as our PT570 Series.



MODEL	A	B	C	D
E706-16	17.25 (43.82)	Ø6.62 (16.81)	Ø6.00 (15.24)	7.62 (19.35)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2415  
MANUAL: 24156

C415 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

E706-16	Dust-tight enclosure, 6-inch (15.24 cm) inside diameter x 16-inch (40.64 cm) length
E706-16P	Same as E706-16 except with purge fittings
E706-16PS	Same as E706-16P except Type 304 stainless steel construction
E706-16S	Same as E706-16 except Type 304 stainless steel construction

**Note:** Models with purge fittings require a filtered compressed air supply (up to 35 psi at 10 cfm) to provide positive pressure internal air circulation. Two 1/4" NPT female fittings provided.

## MECHANICAL

Camera Mounting	Removable sled with multiple mounting holes
Cable Entry	Two adjustable, sealable glands: One with 0.375" (0.95 cm) inside diameter and one with 0.50" (1.27 cm) inside diameter
Viewing Window	0.187" (4.74 mm) thick Lucite® SAR acrylic
Latches	Draw latch with security features
Maximum Camera and Lens Size	<i>With or Without Blower and/or Heater Kits:</i> 3.50" H x 4.25" W x 13.25" L (8.89 x 10.79 x 33.66 cm) or 13.25" L x 4.8" diameter (33.66 x 12.20 cm)

## GENERAL

Construction	Aluminum or Type 304 stainless steel	
Finish	Gray polyester powder coat	
Dimensions	See dimension drawing on front page	
Weight	<u>Unit</u>	<u>Shipping</u>
E706-16	6.72 lb (3.05 kg)	9 lb (4.07 kg)
E706-16P	6.98 lb (3.17 kg)	10 lb (4.53 kg)
E706-16PS	12.35 lb (5.60 kg)	15 lb (6.79 kg)
E706-16S	12.17 lb (5.52 kg)	15 lb (6.79 kg)

## CERTIFICATIONS/RATINGS

- CE compliant

## OPTIONAL ACCESSORIES

<b>Blower Kit</b>	BK700	Continuous duty blower kit; provides 10 cfm of internal air circulation. 120 VAC, 60 Hz operation, 4W
	BK700/220	Same as BK700 except 8 cfm, 230 VAC, 50 Hz, 9W
	BK700/24	Same as BK700 except 19 cfm, 24 VAC, 3W
<b>Heater Kit</b>	HK706-1	Thermostatically controlled heater kit for E706 enclosure, 120 VAC, 80W. Activates on at 40°F (4°C) and off at 60°F (15°C)
	HK706-2	Same as HK706-1 except 24 VAC
	HK706-3	Same as HK706-1 except 230 VAC
<b>Sun Shroud/Visor</b>	E716S	Sun shroud
	E716SS	Same as E716S except Type 304 stainless steel construction
	E706V	Sun visor for E706 series
	E706VS	Same as E706V except Type 304 stainless steel construction
<b>Other</b>	E700A	Air funnel kit. Provides positive pressure air flow across the face of front window to prevent and/or remove dust accumulation. Installation and filtered compressed air supply with minimum of 35 psi at 30 cfm required

## RECOMMENDED MOUNTS

<b>Ceiling/Pedestal</b>	EM1009U/	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.14 kg)
	EM1015U	
	MM22	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.14 kg)
<b>Wall</b>	EM1900U	Medium duty wall mount; maximum load 40 lb (18.14 kg)
	EM22	Medium duty wall mount; maximum load 40 lb (18.14 kg)
<b>Pipe/Pole</b>	EM1109	Medium duty pedestal mount for pipe/pole; maximum load 40 lb (18.14 kg)
	EM2000/	Medium duty mount for vertical/horizontal pipe/pole; maximum load 40 lb (18.14 kg)
	EM2200	

## RECOMMENDED PAN/TILT

PT570 Series	Medium duty pan/tilt; maximum load 40 lb (18.14 kg)
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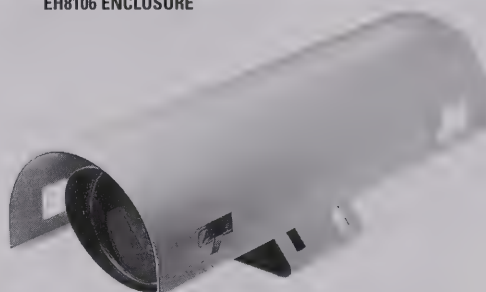
## EH8100 Series Enclosure SPECIALTY, OUTDOOR, PRESSURIZED

### Product Features

- 4- or 6-Inch Diameter
- For Use With Cameras With Fixed Focal Length or Motorized Lenses
- Indoor/Outdoor Applications
- For Use with Fixed Mount or Pan/Tilt
- Meets NEMA Type 6 and IP67 Standards
- Thermostat Controlled Heater(s) Standard Feature
- Easy Access for Service and Installation
- Legacy®-Compatible Version Available (EH8106L Only)



EH8106 ENCLOSURE



ENCLOSURE WITH SUN SHROUD

The **EH8100 Series** are sealed and pressurized outdoor enclosures designed to protect CCTV cameras operating in adverse environmental conditions.

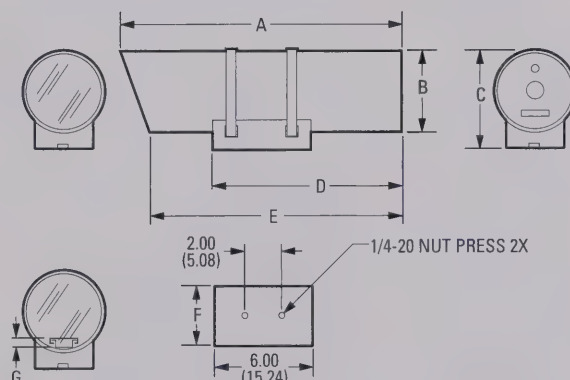
The **EH8100 Series** have lens preset capabilities and are designed to accept CCD cameras with fixed focal length or motorized zoom lenses.

The enclosure is factory sealed and pressurized with dry nitrogen to 5 psi. Should the camera or lens require servicing, the enclosure may be easily recharged in the field. A relief valve prevents overcharging of the enclosure.

The **EH8100 Series** is constructed of aluminum and features an adjustable mounting cradle, sled and track assembly for camera mounting, and a T-handle on the rear plate to facilitate removal for easy access to the camera and lens. Power, video, and lens control cables are routed through an MS-type connector on the rear of the enclosure.

An optional sun shroud is available that helps protect the enclosure from direct sunlight and reduces internal temperature by approximately 10-15° F (6-10° C).

The **EH8100 Series** can be used in fixed mount applications or with a medium-duty pan/tilt, such as our PT570 Series.



	A	B	C	D	E	F	G
EH8104	18.00 (45.72)	4.50 (11.43)	5.50 (13.97)	12.50 (31.57)	17.00 (43.18)	3.00 (7.62)	.92 (2.33)
EH8106	22.00 (55.88)	6.50 (16.51)	7.00 (17.78)	13.00 (33.02)	20.00 (50.80)	7.00 (17.78)	.88 (2.23)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2410  
MANUAL: 214076

C410 / REVISED 3-03

IP67



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

EH8104	Pressurized enclosure with heater, 4-inch (10.16 cm) inside diameter x 17-inch (43.18 cm) lower body length
EH8106*	Pressurized enclosure with heaters, 6-inch (15.24 cm) inside diameter x 20-inch (50.8 cm) lower body length

\*For applications requiring an integrated positioning system, see our Pressurized Legacy Series.

## ELECTRICAL

Input Voltage (for Heaters)	120 VAC (230 VAC optional) for heaters. Factory-wired for 120 VAC; must specify 230 VAC at time of order
Power Consumption (for Heaters)	40W (EH8104) 80W (EH8106) Heater(s) are thermostatically controlled to activate on at 40°F (4°C) and off at 60°F (15°C)
Input Connector	Souriau 85107E2016P, 16-pin jam nut, panel mount receptacle. (Souriau 85106EC2016S, MS-type mating connector supplied.)

### Maximum Cable Distances (120 VAC)

	EH8104	EH8106
16 AWG (1.5 mm <sup>2</sup> )	4,477 ft (1,365 m)	2,238 ft (682 m)
18 AWG (1.0 mm <sup>2</sup> )	2,821 ft (860 m)	1,410 ft (430 m)
20 AWG (0.5 mm <sup>2</sup> )	1,773 ft (540 m)	886 ft (270 m)

### (230 VAC)

	EH8104	EH8106
16 AWG (1.5 mm <sup>2</sup> )	16,449 ft (5,014 m)	8,224 ft (2,507 m)
18 AWG (1.0 mm <sup>2</sup> )	10,364 ft (3,159 m)	5,182 ft (1,579 m)
20 AWG (0.5 mm <sup>2</sup> )	6,514 ft (1,985 m)	3,257 ft (993 m)

## MECHANICAL

Front Window	Tempered glass, 0.225-inch (5.71 mm) thick
Camera Mounting	Multiple mounting holes on camera sled
Maximum Camera and Lens Size	Accepts camera and lens combinations** (including BNC connector) up to: EH8104 2.50" H x 2.50" W x 14.00" L (6.35 x 6.35 x 35.56 cm) or 14.00" L x 3.00" diameter (35.56 x 7.62 cm) EH8106 4.00" H x 4.00" W x 18.00" L (10.16 x 10.16 x 45.72 cm) or 18.00" L x 5.00" diameter (45.72 x 12.7 cm)
Enclosure Mounting	Adjustable cradle secured with stainless steel bands
Purge Fitting	Standard Schraeder valve to allow enclosure to be filled with dry nitrogen
Purge Relief Fitting	Prevents over pressurization of enclosure

\*\*Assumes lens is fully extended.

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Unit Weight	
EH8104	8 lb (3.62 kg)
EH8106	15 lb (6.79 kg)
Shipping Weight	
EH8104	11 lb (4.98 kg)
EH8106	18 lb (8.15 kg)

## ENVIRONMENTAL

Ambient Operating Temperature	-40° to 122°F (-40° to 50°C) with heater(s)
Vibration	5 to 60 Hz with 0.082-inch total travel (15 g's at 60 Hz). From 60 to 1,000 Hz, 5 g's rms with random vibration
Altitude	Sea level to equivalent of 10,000 ft (32,800 m)
Acoustic Noise	Operates in 150 dB acoustic noise environments
Humidity	Up to 100% relative humidity. Standard Schraeder and pressure relief valves provide positive internal pressure with dry nitrogen

## CERTIFICATIONS/RATINGS

- UL Listed (except models with 230 VAC heaters)
- CE, Class A
- Meets NEMA Type 6 standards
- Meets IP67 standards

## OPTIONAL ACCESSORIES

<b>Sun Shroud</b>	SS8004	Sun shroud for EH8104 enclosure
	SS8006	Sun shroud for EH8106 enclosure
<b>Other</b>	EH25/8104ORKIT	EH8104 O-ring kit; includes desiccant bags and lubricant
	EH8006ORKIT	EH8106 O-ring kit; includes desiccant bags and lubricant
	EH8000RKIT	Dry nitrogen recharging kit (non-refillable)
	PSKIT8100	Pressure sensor kit. Provides a contact closure that can be wired to trigger an alarm when internal pressure drops to 2 psi.

## RECOMMENDED MOUNTS

<b>Wall</b>	EM22	Medium duty wall mount; maximum load 40 lb (18.14 kg)
<b>Ceiling/Pedestal</b>	MM22	Medium duty ceiling/pedestal mount maximum load 40 lb (18.14 kg)

## RECOMMENDED PAN/TILTS

PT570 Series	Medium duty pan/tilt; maximum load 40 lb (18.14 kg)
PT1250 Series	Heavy duty pan/tilt; maximum load 100 lb (45.4 kg)

Indicates change or addition.



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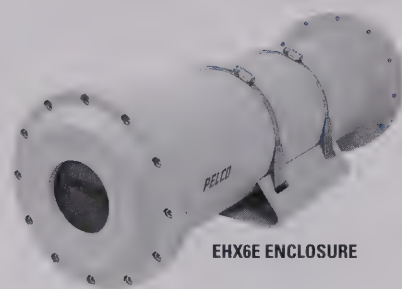
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## EHX\*E Series Enclosure

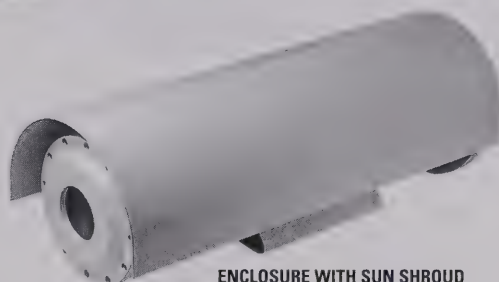
### SPECIALTY, OUTDOOR, EXPLOSIONPROOF

#### Product Features

- Aluminum Construction
- Adjustable Mounting Cradle
- Available in 4-inch (10.16 cm), 6-inch (15.24 cm) and 8-inch (20.32 cm) Diameters
- For use in a Variety of Harsh and/or Hazardous Environments, including Marine Environments
- Meets NEMA Type 4X and IP66 Standards
- Use with Fixed Mount or Explosionproof Pan/Tilt



EHX6E ENCLOSURE



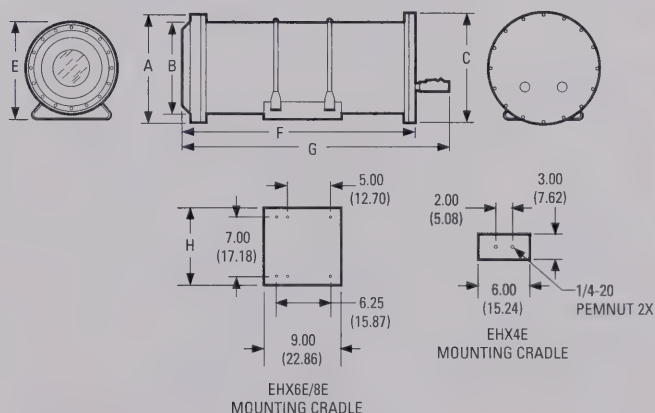
ENCLOSURE WITH SUN SHROUD

The **EHX\*E Series** explosionproof camera enclosures are used in explosive and hazardous atmospheres throughout the world. They are designed to meet the rigorous requirements of explosionproof and dust-ignitionproof electrical equipment for installation and use in hazardous locations. These enclosures are also waterproof and dust tight.

Constructed of aluminum, enclosures in this series are available in 4-inch (10.16 cm), 6-inch (15.24 cm), and 8-inch (20.32 cm) diameters to accommodate most camera and lens combinations. A unique camera mounting sled and track assembly allows fast, easy positioning of the camera and lens and can be securely locked in place.

Field-installed accessories include optional heater, blower and sun shroud.

You can use the **EHX\*E Series** in fixed mount applications or with Pelco's PT1260EX Series explosion-proof pan/tilt.



DIM	EHX4E	EHX6E-16	EHX6E	EHX8E
A	Ø7.00 (17.78)	Ø8.00 (20.32)	Ø8.00 (20.32)	Ø10.13 (25.72)
B	Ø4.50 (11.43)	Ø6.63 (16.83)	Ø6.63 (16.83)	Ø8.63 (21.92)
C	Ø7.00 (17.78)	Ø8.75 (22.23)	Ø8.75 (22.23)	Ø13.00 (33.02)
D	Ø3.19 (8.10)	Ø3.00 (7.62)	Ø3.00 (7.62)	Ø4.25 (10.80)
E	6.75 (17.15)	7.85 (19.94)	7.85 (19.94)	9.65 (24.51)
F	14.25 (36.20)	18.70 (47.50)	26.70 (67.82)	26.67 (67.74)
G	18.25 (46.36)	22.70 (57.66)	30.70 (77.98)	30.67 (77.90)
H	N/A	8.57 (21.77)	8.57 (21.77)	9.12 (23.16)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2417  
MANUAL: 24176

C417 / REVISED 8-03

IP66



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

EHX4E	Explosionproof enclosure, 4" diameter x 12" L (10.16 cm x 30.48 cm)
EHX6E	Explosionproof enclosure, 6" diameter x 24" L (15.24 cm x 60.96 cm)
EHX6E-16	Same as EHX6 except 16" L (40.64 cm)
EHX8E	Explosionproof enclosure, 8" diameter x 24" L (20.32 cm x 60.96 cm)

## MECHANICAL

Cable Entry	2 explosionproof sealable fittings (supplied); 0.50-inch (1.27 cm) maximum inside diameter; pipe plug supplied for possible unused gland in rear plate
Front Window	Fully tempered plate glass
EHX4E	4.25" (10.80 cm) diameter, 0.475" (1.21 cm) thick
EHX6E/EHX6E-16	4.50" (11.43 cm) diameter, 0.50" (1.27 cm) thick
EHX8E	5.75" (14.92 cm) diameter, 0.50" (1.27 cm) thick
Camera Mounting	Adjustable sled
Maximum Camera and Lens Size*	(Without Blower or Heater)
EHX4E	1.75" H x 3.375" W x 12.00" L (4.45 x 8.57 x 30.48 cm)
	12.0" L x 3.0" diameter (30.48 x 7.62 cm)
EHX6E	3.75" H x 4.375" W x 24.00" L (9.53 x 11.11 x 60.96 cm)
	24.0" L x 5.0" diameter (60.96 x 12.70 cm)
EHX6E-16	3.75" H x 4.375" W x 16.00" L (9.53 x 11.11 x 40.64 cm)
	16.0" L x 5.0" diameter (40.64 x 12.70 cm)
EHX8E	5.75" H x 5.125" W x 24.00" L (14.60 x 13.02 x 60.96 cm)
	24.0" L x 7.3" diameter (60.96 x 18.54 cm)
	(With Heater Only)
EHX4E (only)	1.75" H x 3.375" W x 10.375" L (4.45 x 8.57 x 26.35 cm)
	10.38" L x 3.00" diameter (26.36 x 7.62 cm)
	(With Blower Only or Blower and Heater)
EHX4E	1.75" H x 3.375" W x 9.00" L (4.45 x 8.57 x 22.86 cm)
	9.0" L x 3.0" diameter (22.86 x 7.62 cm)
EHX6E	3.75" H x 4.375" W x 22.25" L (9.53 x 11.11 x 56.52 cm)
	22.25" L x 5.00" diameter (56.52 x 12.70 cm)
EHX6E-16	3.75" H x 4.375" W x 14.25" L (9.53 x 11.11 x 36.20 cm)
	14.25" L x 5.00" diameter (36.20 x 12.70 cm)
EHX8E	5.75" H x 5.125" W x 22.25" L (14.60 x 13.02 x 56.52 cm)
	22.25" L x 7.30" diameter (56.52 x 18.54 cm)

\*Assumes lens is fully extended.

## GENERAL

Construction	Aluminum, pipe 6061T6
Dimensions	See dimension drawing on front page
Weight	Unit Shipping
EHX4E	15 lb (6.79 kg) 19 lb (8.60 kg)
EHX6E	31 lb (14.04 kg) 36 lb (16.30 kg)
EHX6E-16	27 lb (12.23 kg) 32 lb (14.49 kg)
EHX8E	45 lb (20.41 kg) 53 lb (24.04 kg)

## CERTIFICATIONS/RATINGS

- CE
- UL/cUL
- Classified by Underwriters Laboratories Inc. as to explosion and fire hazard only
- Type 4X enclosure for use in hazardous locations
- Class I, Groups C and D – Class II, Groups E, F, and G
- Class I, Zone 1, AEx d IIB, Ex d IIB
- ATEX
- 03 ATEX 0318166U
- 0035 II 2 G EEx d IIB
- II 2 D, IP 66
- Suitable for marine outside (saltwater) use, for vessels over 65 feet in length

## OPTIONAL ACCESSORIES

Blower Kit	BKX4000	Continuous duty blower kit for EHX4E only, 10 cfm, 120 VAC, 3.8 W at 60 Hz
	BKX4024	Same as BKX4000 except 19.4 cfm, 24 VDC (AC rectified), 1.92 W
	BKX6000	Continuous duty blower kit for EHX6E and EHX8E, 10 cfm, 120 VAC, 3.8 W at 60 Hz
	BKX6000/220	Same as BKX6000 except 8 cfm, 230 VAC, 9.6 W at 50 Hz
	BKX6024	Same as BKX6000 except 19.4 cfm, 24 VDC (AC rectified), 1.92 W
Heater Kit	HKX4-1*	Heater kit for EHX4E only, 120 VAC, 40 W
	HKX4-2*	Same as HKX4-1 except 24 VAC
	HKX4-3*	Same as HKX4-1 except 230 VAC, 80 W
	HKX6-1*	Heater kit for EHX6E only, 120 VAC, 80 W
	HKX6-2*	Same as HKX6-1 except 24 VAC
	HKX6-3*	Same as HKX6-1 except 230 VAC
	HKX8/10-1*	Heater kit for EHX8E only, 120 VAC, 107 W
	HKX8/10-2*	Same as HKX8-1 except 24 VAC
	HKX8/10-3*	Same as HKX8-1 except 230 VAC
	SSEHX4E	Sun shroud for EHX4E only
	SSEHX6E	Sun shroud for EHX6E only
Sun Shroud	SSEHX6E-16	Sun shroud for EHX6E-16 only
	SSEHX8E	Sun shroud for EHX8E only
Other	EHX*EORKIT	O-ring kit for EHX*E Series. Consult factory for applicable model numbers

\*Heaters activate on at 40°F (4°C) and off at 60°F (15°C)

## RECOMMENDED MOUNTS

EHX4E	EM1109,	Medium duty mount for horizontal/vertical pipe or pole; maximum load 40 lb (18.1 kg)
	EM2000,	
	EM2200	
	EM22	Medium duty wall mount; maximum load 40 lb (18.1 kg)
	MM22	Medium duty ceiling/pedestal mount; maximum load 40 lb (18.1 kg)
EHX6E/EHX8E	PM2000,	Pedestal/ceiling mount; maximum load 125 lb (56.62 kg)
	PM2010**	
	WM2000**	Wall mount; maximum load 75 lb (34 kg); increased to 150 lb (68 kg) when used with ST1 strut
	WM3026	Heavy duty wall mount with adjustable head; maximum load 300 lb (136 kg)
Adapters	AH2000	Adjustable head
	ST1	Support strut

\*\*Use with AH2000 adjustable head.

## RECOMMENDED PAN/TILT

PT1260EX Series	Heavy duty explosionproof pan/tilt; maximum load 100 lb (45.4 kg).
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Indicates change or addition.



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## HS8080/HS8134 Enclosure

### HIGH SECURITY, INDOOR, CEILING MOUNT

#### Product Features

- Low Cost
- Indoor or Outdoor (Moderate Environment) Applications
- Aluminum (HS8080) or Steel (HS8134) Construction
- Adjustable Camera Mount
- Mounts Directly to Ceiling
- Attractive, Rugged Powder Coat Finish
- Single Tamper-Proof Screw Provides Quick Access and Increased Security
- Tamper Switch Standard Feature on HS808



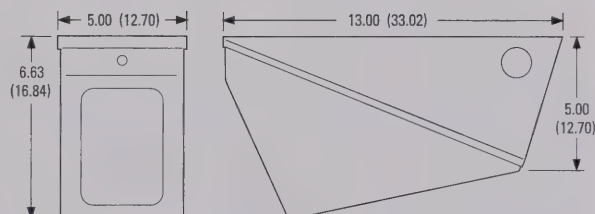
HS8080

The **HS8080/HS8134** are high security ceiling mount enclosures designed for applications requiring maximum protection from vandalism. The **HS8080** is constructed from heavy gauge aluminum for moderate damage resistance; the **HS8134** is constructed from heavy gauge steel for high damage resistance.

The **HS8080/HS8134** feature a hinged lower cover that swings down to allow easy access to the camera and lens. The removable camera mount can be easily positioned for various viewing angles, and conduit knockouts allow cabling to be delivered from the wall (either side) or ceiling.

There is no exposed mounting hardware securing the **HS8080/HS8134** to its mounting surface. Opening the enclosure can only be accomplished with a specially designed tool (included), eliminating the possibility of the enclosure being opened by unauthorized persons. A factory-installed tamper switch is mounted on the secured access cover of the **HS8080**. An impact-resistant Lexan® window is supplied with the enclosure.

The **HS8080/HS8134** are also ideal for use in outdoor applications such as parking garages or other applications offering protection from environmental elements.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ENCLOSURES,  
HIGH SECURITY



DataFAX

SPEC: 21466

MANUAL: 21466

C1466 / REVISED 10-02

U.S. Patent #403,340, #6,019,524

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

HS8080	High security enclosure constructed from heavy gauge aluminum. Moderate damage resistance
HS8134	High security enclosure constructed from heavy gauge steel. High damage resistance

## MECHANICAL

Enclosure Mounting	Four 0.25-inch (0.63 cm) holes on mounting surface
Camera Mounting	Removable, adjustable camera mount
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 3.50" H x 3.00" W x 9.75" L (8.89 x 7.62 x 24.77 cm)
Viewing Window	
HS8080	0.25-inch (6.35 mm) thick Lexan®
HS8134	0.50-inch (12.7 mm) thick Lexan®
Viewing Window Area	3.25" W x 4.75" H (8.25 x 12.07 cm)
Cable Entry	Three 0.875-inch (2.22 cm) diameter knockouts; will accept 0.5-inch (1.27 cm) conduit fitting. One each on flat mounting surface and sides of enclosure
Security	Tamper-resistant screw (hollow Allen wrench supplied)
Tamper Switch	Plunger type door switch with "pull-to-cheat" feature

\*Assumes lens is fully extended.

## ELECTRICAL

Tamper Switch	0.25-inch (0.63 cm) quick connect. N.O./N.C. 10A maximum switching current 125 VAC maximum switching voltage
---------------	--

## GENERAL

Construction	
HS8080	0.080-inch (2.03 mm) aluminum
HS8134	10 gauge CRS, 0.134-inch (3.40 mm)
Finish	Gray polyester powder coat
Environment	Indoor or outdoor (in covered or protected environment)
Unit Weight	
HS8080	2.65 lb (1.20 kg)
HS8134	4.15 lb (1.88 kg)
Shipping Weight	
HS8080	3 lb (1.35 kg)
HS8134	5 lb (2.27 kg)

## CERTIFICATIONS/RATINGS

- Meets NEMA Type 1 standards



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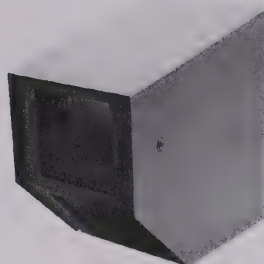


## HS8000/HS8013 Enclosure

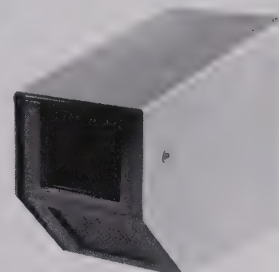
### HIGH SECURITY, INDOOR/OUTDOOR, WALL/CEILING/CORNER MOUNT

#### Product Features

- Vandal Resistant
- Indoor/Outdoor
- All-Steel Construction (10-Gauge)
- Speaker Grill Included
- 3 Window Ports to Choose From
- Primarily Intended for Wall Applications (Can Be Adapted for Corner or Ceiling Applications with Optional Mount)
- Tamper Switch Standard Feature



HS8000 ENCLOSURE



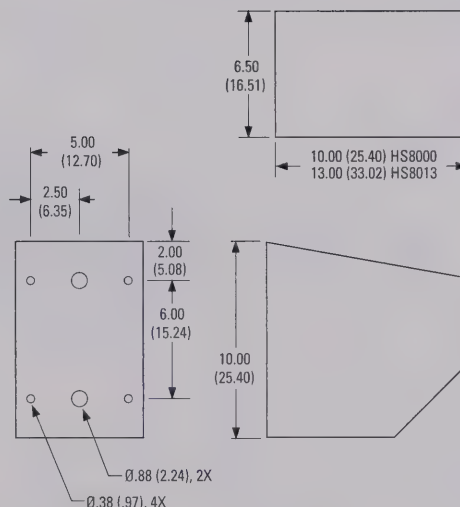
HS8013 ENCLOSURE

The **HS8000** and **HS8013** are high security enclosures constructed from heavy gauge steel and designed for installations such as prisons, detention cells, etc., requiring maximum protection from vandalism.

The **HS8000** will accept most CCD cameras with fixed focal length lenses. The **HS8013** body has an added depth of three inches and will accommodate longer camera and lens combinations positioned at a steeper angle. There is no exposed mounting hardware securing the enclosure to its mounting surface. Opening the enclosure can only be accomplished with a specially designed tool (supplied), eliminating the possibility of the enclosure being opened by unauthorized persons.

Designed primarily for wall applications, the **HS8000/HS8013** features a Lexan® window, speaker grill for four-inch square speaker, and blank filler plate. The unit is factory shipped for wall applications with the window installed in the uppermost position. The window, speaker grill and filler plate can be easily removed and repositioned according to your application requirements.

Optional accessories include a corner mounting bracket, 120/24 VAC heater kit for low temperature operation, and a ceiling adapter (for **HS8000** only) that gives the enclosure the appearance of being mounted flush with the ceiling.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

ENCLOSURES  
HIGH SECURITY



DataFAX  
SPEC: 2480  
MANUAL: 24806

C480 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001  
**ISO 9001**  
CERTIFIED

## MODELS

HS8000	High security camera enclosure constructed from heavy gauge steel
HS8013	Same as HS8000 except enclosure is made 3 inches (7.62 cm) deeper to accommodate a longer camera and lens

## MECHANICAL

Camera Mounting	Adjustable tilt table
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 4" H x 4" W x 8" L (10.16 x 10.16 x 20.32 cm) 4" H x 4" W x 11" L (10.16 x 10.16 x 27.94 cm) Two .875-inch (2.22 cm) diameter holes on flat mounting surface 0.50-inch (12.7 mm) thick Lexan® 3.75" H x 4.00" W (9.52 x 10.16 cm) Four 0.39-inch (0.99 cm) diameter holes on protected rear surface Tamper-resistant screws (hollow Allen wrench supplied) Plunger type door switch with "pull-to-cheat" feature. DM electrical rating 10A, 125 VAC. N.O./N.C. switch contact
Viewing Window	
Viewing Window Area	
Enclosure Mounting	
Security	
Tamper Switch	

\*Assumes lens is fully extended.

## ELECTRICAL

Electrical Connection	Six-position terminal block supplied
Tamper Switch	0.25-inch (0.63 cm) quick connect. N.O./N.C. 10A maximum switching current 125 VAC maximum switching voltage

## GENERAL

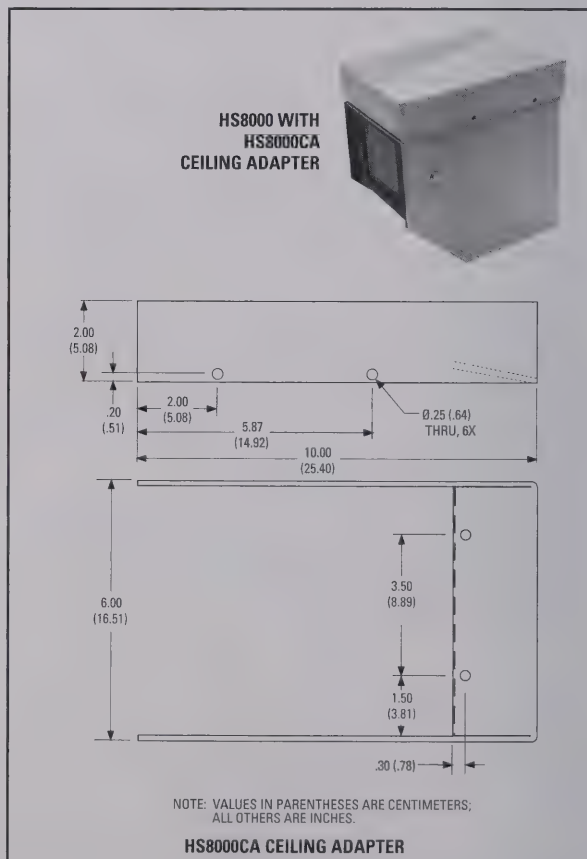
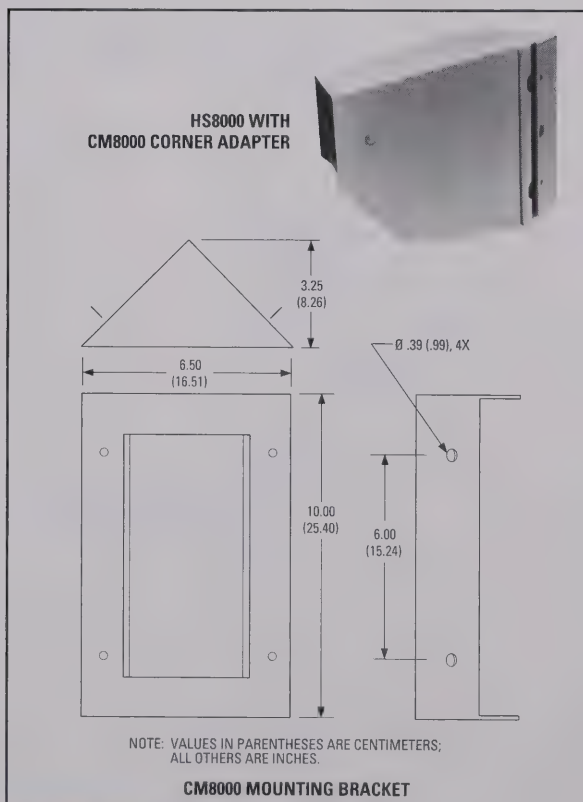
Construction	0.134-inch (3.40 mm) thick, seam-welded 10-gauge steel
Finish	Gray polyester powder coat (body) with black trim around window ports
Unit Weight	
HS8000	22 lb (9.9 kg)
HS8013	25 lb (11.39 kg)
Shipping Weight	
HS8000	23 lb (10.4 kg)
HS8013	27 lb (12.11 kg)

## CERTIFICATIONS/RATINGS

- UL Listed (HS8000 only)
- CE compliant (HK8000 and HK8024 only)
- Meets NEMA Type 3R standards

## OPTIONAL ACCESSORIES

CM8000	Corner mounting bracket
HK8000	120/230 VAC, 80W, thermostatically controlled heater kit. Activates on at 40°F (4°C) and off at 60°F (16°C)
HK8024	Same as HK8000 except 24 VAC
HS8000CA	Ceiling adapter plate (for use with HS8000 only)



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## HS4514 Series Enclosure

### HIGH SECURITY, OUTDOOR, BULLET-RESISTANT

#### Product Features

- Effective in High Crime Areas, Such as Parking Garages, Subways, and Highways, Where a Vandal-Resistant Enclosure is Preferred
- Enclosure Protected Against Handgun Attack
- Tamper-Resistant Screws Secure the Enclosure Cover
- Constructed from Heavy Gauge Steel
- Designed for Use with Cameras in Fixed-Mount Applications

The **HS4514 Series** are high security environmental enclosures, designed for use with CCD format cameras with fixed auto iris or 1/3-inch format motorized zoom lenses with a maximum focal length of 300 mm.

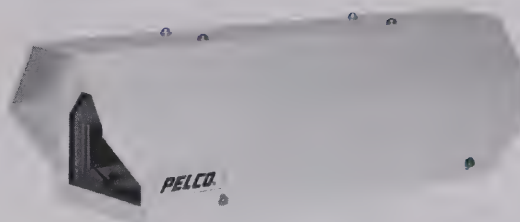
The enclosures are designed to withstand, without penetration, rounds fired from a .357 Magnum handgun from a distance of 15 feet (4.6 m). The enclosures are designed to meet the UL752, Level 2 bullet-resisting standard.

The viewing window is designed to meet the UL752, Level 3 bullet-resisting standard. The window stops a bullet without penetration and will not pulverize or spall into sharp, dangerous shards.

Constructed from steel to provide maximum protection and durability, the **HS4514 Series** enclosures are engineered for ease of installation and service. The removable top allows convenient access to the camera and lens for periodic servicing and/or adjustments. The **HS4514 Series** also features a removable camera sled that can be inverted to accommodate various camera and lens combinations. Tamper-resistant screws secure the enclosure cover.

The **HS4514-1/-2/-3** enclosures are equipped with a factory-installed thermostatically controlled heater.

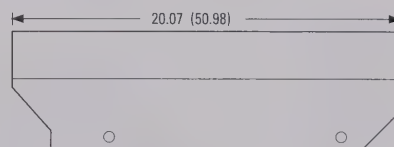
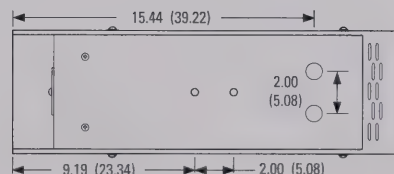
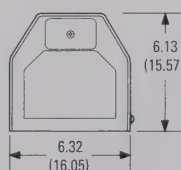
Optional accessories for the HS4514 model include a thermostatically controlled heater, blower, preset position lens wire harness, a 120 VAC electrical outlet, and sun shroud. The sun shroud protects the enclosure from the direct rays of the sun and reduces the internal temperature of the enclosure approximately 10-15° F (6-10° C).



HS4514 ENCLOSURE



ENCLOSURE WITH SUN SHROUD



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21472  
MANUAL: 214726

C1472 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

Model Number	Basic Enclosure	120 VAC	24 VAC	230 VAC	Heater	Blower	Max. Power Consumption
HS4514	•						
HS4514-1	•	•			•		60W
HS4514-2	•		•		•		50W
HS4514-3	•			•	•		55W

## MECHANICAL

Camera Mounting	Removable camera sled; can be inverted
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to:
HS4514	6.70" H x 5.25" W x 14.0" L (17.02 x 13.34 x 35.56 cm)
HS4514-1/-2/-3	6.25" H x 3.75" W x 12.0" L (15.88 x 9.53 x 30.48 cm)
Viewing Window Area	3.44" H x 4.75" W (8.74 x 12.07 cm)
Cable Entry	Two 0.875-inch (2.22 cm) diameter openings. Will accept PG-13.5 liquid-tight fittings. Maximum cable diameter 0.47-inch (1.19 cm) or 0.50-inch (1.27 cm) conduit fittings
Security	Four 1/4-20 tamper-resistant screws (hollow Allen wrench supplied)

\*Assumes lens is fully extended.

## ELECTRICAL

Input Voltage	120 VAC, 60 HZ
HS4514-1	24 VAC, 60 HZ
HS4514-2	230 VAC, 50 HZ
HS4514-3	Heater is thermostatically controlled to activate on at 42-58°F (6-14°C) and off at 72-88°F (22-31°C)
Heater	

## GENERAL

Construction	0.134-inch thick steel
Body	1.25-inch (31.75 mm) thick, optically clear, bullet-resistant, MR5 coated, Lexan® Lexgard™ (UL 752, Level 3 {357 Mag} rated)
Viewing Window	Gray polyester powder coat
Finish	Indoor/outdoor
Environment	-10° to 100°F (-23 to 38°C); -10° to 120°F (-23 to 49°C) with blower kit and sun shroud
Ambient Temperature	27 lb (12.25 kg)
Unit Weight	32 lb (14.51 kg)
Shipping Weight	

## CERTIFICATIONS/RATINGS

- CE, Class A (all models)
- Meets NEMA Type 3 standards (NEMA 3R with blower kit installed and vents open)
- Meets IP55 standards (IP24 with blower kit installed and vents open)
- UL Listed (HS4514, HS4514-1, HS4514-2)

## OPTIONAL ACCESSORIES

<b>Blower Kit</b>	BK4514-1*	Blower kit, 120 VAC, 8W
	BK4514-2*	Blower kit, 24 VAC, 8W
<b>Heater Kit</b>	HK4514-1*	Heater kit, 120 VAC, 60W
	HK4514-2*	Heater kit, 24 VAC, 50W
	HK4514-3*	Heater kit, 230 VAC, 55W
<b>Sun Shroud</b>	SS4514	Sun shroud
<b>Other</b>	O/I-LPP*	Preset position lens wire harness
	O/I-PCB4514	Accessory interface board; thermostatically controls heater and blower operation (one per enclosure required)
	O/I-OUTLET*	120 VAC electrical convenience outlet

\*These accessories are factory wired with a plug-in connector for use with the O/I-PCB4514. The O/I-PCB4514 is included with all -1/-2/-3 models. You must order one O/I-PCB4514 if you are using a basic enclosure (HS4514) with these optional accessories.

## RECOMMENDED MOUNTS

<b>Ceiling/</b>	PM2000/	Ceiling/pedestal mount; maximum load
<b>Pedestal</b>	PM2010**	125 lb (56.6 kg)
<b>Wall</b>	WM2000†	Wall mount; maximum load 75 lb (33.9 kg)
<b>Adapters</b>	AH2000	Adjustable pan/tilt head.
	ST1	Support strut; for use with WM2000. Increases maximum load to 150 lb (68.0 kg)

\*\*Use with AH2000 adjustable head.

†Use with AH2000 adjustable head and ST1 strut.



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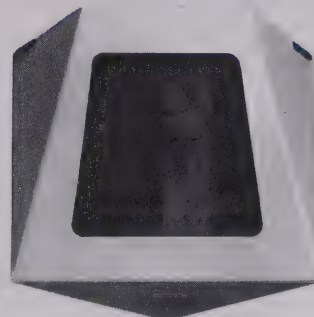


## HS1500/HS2000 Enclosure

### HIGH SECURITY, INDOOR, CORNER MOUNT

#### Product Features

- Vandal Resistant
- Indoor, Corner Mount Applications
- All-Steel Construction
  - HS1500 (10-Gauge)
  - HS2000 (14-Gauge)
- No Exposed Mounting Hardware
- Tamper Switch Standard Feature

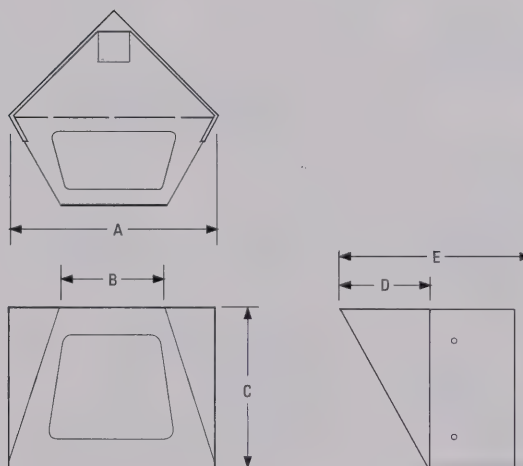


HS1500

The **HS1500** and **HS2000** high security enclosures are designed for applications such as elevators, parking garages, classrooms, detention cells, etc., requiring maximum protection from vandalism. The **HS1500** is of medium size and the **HS2000** is the smaller of the two enclosures. Designed to fit flush to the ceiling in a corner, an optional hood (HS1500H) is available for the **HS1500** only to allow the enclosure to be mounted lower on the wall without compromising security. An impact-resistant clear Lexan® window is a standard feature on both models.

The **HS1500** is constructed of heavy gauge steel and will accept most CCD cameras with fixed focal length and varifocal lenses. The **HS2000** is constructed from medium gauge steel and is designed for use with CCD cameras with fixed focal length or auto iris lenses.

There is no exposed mounting hardware securing the enclosure to its mounting surface. Opening the enclosure can be accomplished only by removing the tamper-resistant screw from the bottom with the specially designed tool provided, eliminating the possibility of the enclosure being opened by unauthorized personnel. A factory-installed tamper switch is mounted on the secured access cover.



MODEL		
	HS1500	HS2000
A	13.13 (33.35)	10.25 (26.04)
B	6.50 (16.51)	4.50 (11.43)
C	10.00 (25.40)	8.00 (20.23)
D	5.75 (14.61)	5.00 (12.70)
E	12.25 (31.12)	10.13 (25.73)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ENCLOSURES  
HIGH SECURITY



DataFAX

SPEC: 2493

MANUAL: 24936 (HS1500), 24946 (HS2000)

C493 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

HS1500	High security corner mount enclosure of medium size; designed to fit flush with the ceiling
HS2000	Same as HS1500 except smaller in size

## MECHANICAL

Camera Mounting	Adjustable tilt table
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 4.0" H x 4.0" W x 8.0" L (10.16 x 10.16 x 20.32 cm)
HS1500	4.0" H x 4.0" W x 8.0" L (10.16 x 10.16 x 20.32 cm)
HS2000	3.0" H x 3.0" W x 6.0" L (7.62 x 7.62 x 15.24 cm)
Enclosure Mounting	Four 0.390-inch (0.99 cm) diameter holes on protected rear surface
Cable Entry	Access through back and top
Security	Tamper-resistant screw (hollow Allen wrench supplied)
Tamper Switch	Plunger type door switch with "pull-to-cheat" feature. DM electrical rating 10A, 125 VAC. N.O./N.C. switch contact

\*Assumes lens is fully extended.

## ELECTRICAL

Tamper Switch	0.25-inch (0.63 cm) quick connect N.O./N.C. 10A maximum switching current 125 VAC maximum switching voltage
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## GENERAL

Window	
HS1500	0.50-inch (12.7 mm) thick Lexan®
HS2000	0.25-inch (6.33 mm) thick Lexan®
Construction	
HS1500	0.134-inch (3.40 mm) formed, 10-gauge steel
HS2000	0.074-inch (1.87 mm) formed, 14-gauge steel
Finish	Gray polyester powder coat
Environment	Indoor; 32° to 120°F (0° to 49°C)
Unit Weight	
HS1500	17.37 lb (7.88 kg)
HS2000	7.77 lb (3.52 kg)
Shipping Weight	
HS1500	20 lb (9.06 kg)
HS2000	9 lb (4.07 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

<b>Heater-Blower Kit</b>	HB1500	120 VAC, 85 watt, heater-blower kit for HS1500 only. Heater activates on at 40°F (4°C) and off at 60°F (15°C). Blower provides continuous internal air circulation
	HB1524	Same as HB1500 except 24 VAC operation
<b>Other</b>	HS1500H	Hood for mid-wall mounting of HS1500



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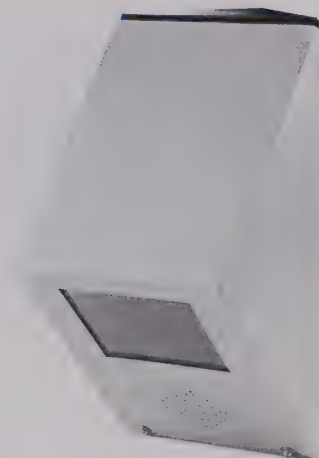


## HS2500 Enclosure

### HIGH SECURITY, INDOOR, CORNER MOUNT

#### Product Features

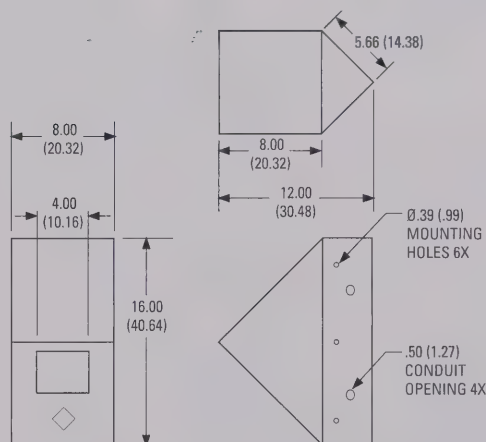
- Vandal Resistant
- Indoor (Covered), Corner Installation
- No Exposed Mounting Hardware
- All-Steel Construction (14-Gauge)
- Prewired Speaker, 3.5 Inches Square
- Tamper Switch Standard Feature



The **HS2500** is a high security enclosure designed for indoor use in applications such as parking garages, stairwells, detention cells, or other areas requiring maximum protection from vandalism. The **HS2500** fits flush to the ceiling in a corner, but can be mounted lower on the wall and still retain its effectiveness. The hinged front cover is supplied with an impact-resistant clear Lexan® window.

Constructed from medium gauge steel, the **HS2500** will accept most CCD cameras with fixed focal length and auto-iris lenses. There is no exposed mounting hardware securing the enclosure to its mounting surface. Opening the enclosure can be accomplished only by removing the two tamper-resistant screws near the bottom and lifting the cover. A factory-installed tamper switch is mounted on the secured access cover.

Options for this enclosure include a smoked window, thermostatically controlled heater kit (24 or 120 VAC), and 3.5-inch (8.89 cm) square, 12-watt, 8-ohm speaker for optional audio surveillance or two-way communication.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

ENCLOSURES,  
HIGH SECURITY



DataFAX  
SPEC: 2486  
MANUAL: 24866

C486 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

HS2500	High security, corner mount enclosure
HS2500/SPKR	Same as HS2500 except supplied with factory prewired 3.5-inch (8.89 cm) speaker for audio surveillance or two-way communication

## MECHANICAL

Window	0.25-inch (6.35 mm) thick Lexan®
Camera Mounting	Adjustable tilt table
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 3.00" H x 3.00" W x 10.00" L (7.62 x 7.62 x 25.40 cm)
Enclosure Mounting	Six 0.39-inch (0.99 cm) diameter holes on protected rear surface
Cable Entry	Four 0.50-inch (1.27 cm) conduit openings on mounting surface (access through back)
Security	Tamper-resistant screws Optional speaker for audio surveillance
Tamper Switch	Plunger type door switch with "pull-to-cheat" feature

\*Assumes lens is fully extended.

## ELECTRICAL

Electrical Connection	One 6-position terminal block
Tamper Switch	0.25-inch (0.63 cm) quick connect N.O./N.C. 10A maximum switching current 125 VAC maximum switching voltage

## GENERAL

Construction	0.074-inch (1.87 mm) thick formed/welded 14-gauge steel
Finish	Gray polyester powder coat
Environment	Indoor (covered) 32° to 120°F (0° to 49°C)
Weight	
HS2500	13.07 lb (5.93 kg)
HS2500/SPKR	13.76 lb (6.24 kg)
Shipping Weight	
HS2500	16 lb (7.24 kg)
HS2500/SPKR	16 lb (7.24 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- CE compliant (HK8000 and HK8024 only)
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

Heater Kit	HK8000	Thermostatically controlled heater kit, 120/230 VAC, 80 watts. Activates on at 40°F (4°C) and off at 60°F (15°C)
	HK8024	Same as HK8000 except 24 VAC operation
Other	HS250010000	Speaker, 3.5 inches (8.89 cm) square, 12 watts, 8 ohms
	HS250010106	Smoked window, 0.25-inch (6.35 mm) thick Lexan®



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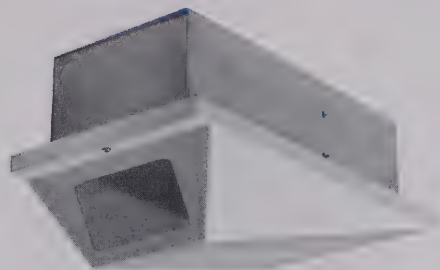


# HS2100 Enclosure

## HIGH SECURITY, LOW PROFILE CEILING MOUNT

### Product Features

- Low Profile, Small "Wedge" Style
- Designed for Use with CCD Type Cameras
- For Use in Fixed or Dropped (False) Ceilings
- Hinged Door Opens for Convenient Access to Camera
- Constructed from Aluminum (Upper Section) and Steel (Lower Section)

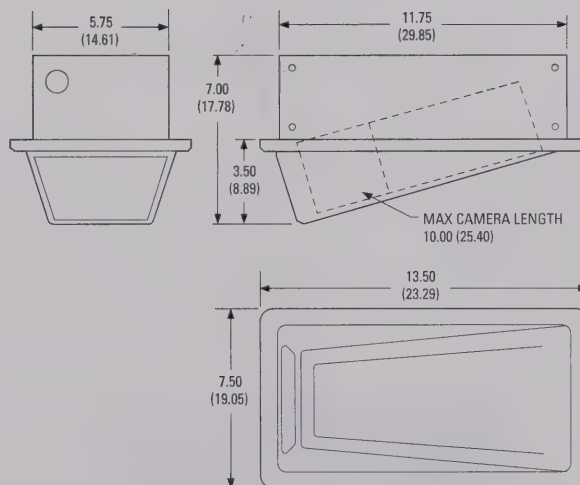


The **HS2100** is a low profile ceiling enclosure designed for use with solid-state CCD cameras. The unobtrusive, compact design compliments any business or office decor and provides maximum surveillance for fixed camera applications.

The enclosure is designed for use in fixed or dropped (false) ceilings. The upper section mounted above the ceiling is constructed from aluminum; the lower section is constructed from steel to provide maximum protection and durability.

Because of the lightweight design, the enclosure can be mounted directly on a ceiling tile without the use of an additional mounting plate. Pelco offers an optional 360-degree rotating mounting plate (**E2100**) for false ceiling applications, which allows the enclosure to be rotated in 10-degree increments to change the viewing area.

The **HS2100** is engineered for ease of installation and service. The lower section is hinged to provide convenient access for camera and lens adjustments. The adjustable camera mount allows the camera to be positioned vertically or horizontally, depending on the camera size. A tamper-resistant screw secures the enclosure cover.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

ENCLOSURES  
HIGH SECURITY



DataFAX  
SPEC: 21465  
MANUAL: 214656

C1465 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODEL

HS2100

Low profile, high security enclosure for use in ceiling applications

## MECHANICAL

Camera Mounting

Adjustable bracket capable of supporting a maximum of 10 lb (4.53 kg)

Maximum

Camera and Lens Size

Accepts camera and lens combinations\* (including BNC connector) up to:  
3.00" H x 4.00" W x 10.00" L  
(7.62 x 10.16 x 25.40 cm)

Viewing Window Area

4.00" W x 2.25" H (10.16 x 5.72 cm)

Ceiling Mounting

Upper section flange-mounted to fixed ceiling or ceiling tile. Ceiling support rails provided.

Cable Entry

Two conduit knockouts on upper back box

Lock

Tamper-resistant screw (tool supplied for removing screw)

\*Assumes lens is fully extended.

## GENERAL

Construction

Upper section

Aluminum

Lower section

0.074-inch (1.88 mm) thick, seam-welded  
14-gauge steel

Viewing Window

0.25-inch (6.35 mm) thick, Lexan®

Color

Upper section

Alodine

Lower section

White polyester powder coat  
Indoor; 32° to 120°F (0° to 49°C)

Environment

Unit Weight

HS2100

5.30 lb (2.41 kg)

E2100

3.66 lb (1.66 kg)

Shipping Weight

HS2100

7 lb (3.17 kg)

E2100

6 lb (2.71 kg)

## CERTIFICATIONS/RATINGS

- Meets NEMA Type 1 standards

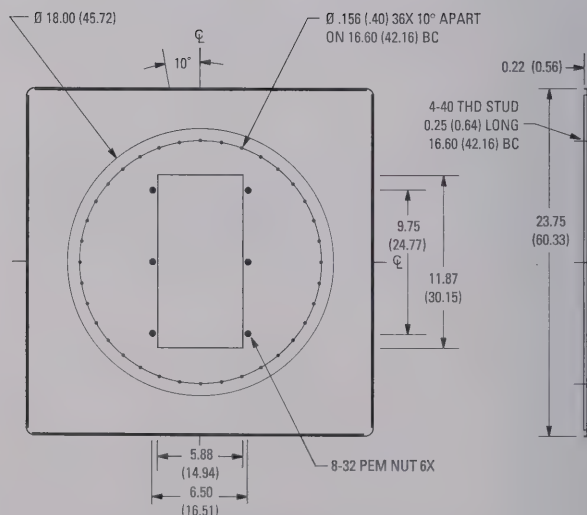
## OPTIONAL ACCESSORIES

E2100

360° rotating mounting plate; rotates in 10° increments and features "locking" capability to secure enclosure positioning. Replaces 2 ft x 2 ft (61 cm x 61 cm) ceiling tile; can be used in 2 ft x 4 ft (61 cm x 122 cm) ceiling tile with additional T-rail for support. Constructed of aluminum with textured white polyester powder coat finish.



E2100 MOUNTING PLATE



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



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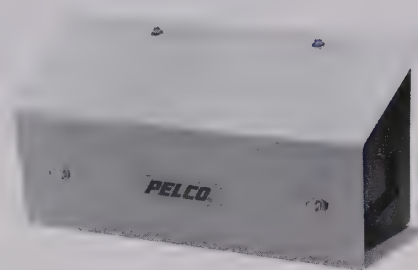
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## HS3000/HS3020 Enclosure

### HIGH SECURITY, INDOOR, CEILING/WALL MOUNT

#### Product Features

- Indoor Applications
- All-Steel Construction (14-Gauge)
- Wall or Ceiling Mounting
- 2 Window Ports to Choose From
- No Exposed Mounting Hardware
- Tamper-Proof Fasteners Secure Enclosure
- Tamper Switch Standard Feature

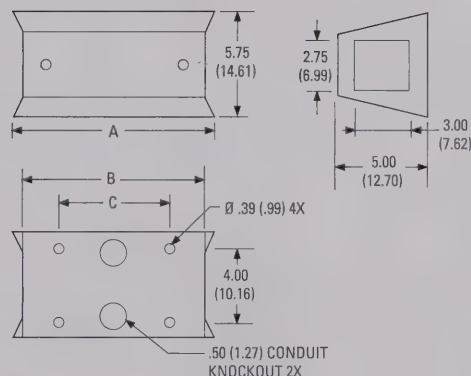


The **HS3000/HS3020** are high security camera enclosures designed for installations such as ATM bank machines, prisons, detention cells, etc., requiring maximum protection from vandalism.

Constructed from medium gauge steel, the enclosure is available in 10-inch (25.40 cm) and 20-inch (50.8 cm) lengths. Both enclosures will accept most cameras with fixed focal and varifocal length lenses. There is no exposed mounting hardware securing the enclosure to its mounting surface. Opening the enclosure can be accomplished only with a specially designed tool, eliminating the possibility of the enclosure being opened by unauthorized personnel. A factory-installed tamper switch is mounted on the secured access cover.

Designed to function as a wall or ceiling enclosure, the **HS3000/HS3020** is versatile because it allows you to re-position the window to the opposite end of the enclosure should the viewing area requirements change. An impact-resistant, 0.25-inch (6.35 mm) thick, smoked Lexan® window is supplied with the enclosure for discreet surveillance.

An optional metal frame adapter (**HS3020CA**) with conduit knock-outs is available for surface mounted conduit applications (for use with **HS3020** only). Other options (for both enclosures) include a clear Lexan® window and 120 VAC or 24 VAC heater kit.



MODEL	A	B	C
HS3000	11.00 (27.94)	10.00 (25.40)	6.00 (15.24)
HS3020	21.00 (53.34)	20.00 (50.80)	12.00 (30.48)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2483  
MANUAL: 24836

C483 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



ENCLOSURES  
HIGH SECURITY

# TECHNICAL SPECIFICATIONS

## MODELS

HS3000	High security camera enclosure, 10-inch (25.40 cm) lower body length, constructed from heavy gauge steel
HS3020	Same as HS3000 except 20-inch (50.8 cm) lower body length

## MECHANICAL

Camera Mounting	Adjustable tilt table
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to:
HS3000	3.75" H x 3.25" W x 9.00" L (9.52 x 8.25 x 22.86 cm)
HS3020	3.75" H x 3.25" W x 18.00" L (9.52 x 8.25 x 45.72 cm)
Window Viewing Area	2.75" H x 3.00" W (6.99 x 7.62 cm)
Enclosure Mounting	Four 0.39-inch (0.99 cm) diameter holes on protected rear surface
Cable Entry	Three 0.50-inch (1.27 cm) cable knock-out holes; two on flat mounting surface and one on end opposite viewing window
Security	Two tamper-resistant screws (hollow Allen wrench supplied)
Tamper Switch	Plunger type door switch with "pull-to-cheat" feature

\*Assumes lens is fully extended.

## ELECTRICAL

Tamper Switch	0.25-inch (0.63 cm) quick connect N.O./N.C. 10A maximum switching current 125 VAC maximum switching voltage
---------------	---

## GENERAL

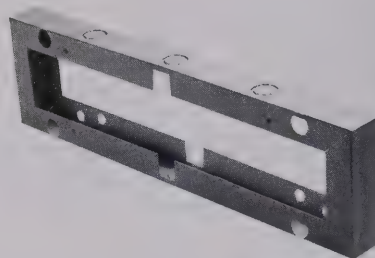
Window	Smoked (1 f-stop attenuation), 0.25-inch (6.35 mm) thick Lexan®
Construction	0.074-inch (1.87 mm) thick, seam-welded 14-gauge steel
Finish	Gray polyester powder coat
Environment	Indoor; 32° to 120°F (0°C to 49°C)
Weight	
HS3000	7.36 lb (3.34 kg)
HS3020	12.21 lb (5.54 kg)
Shipping Weight	
HS3000	9 lb (4.07 kg)
HS3020	14 lb (6.34 kg)

## CERTIFICATIONS/RATINGS

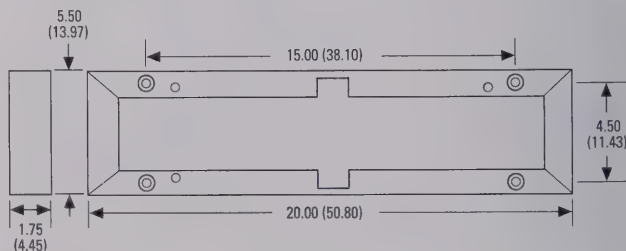
- UL Listed
- CE compliant (HKHS3024 only)
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

<b>Heater Kit</b>	HKHS3000	Heater kit, 120 VAC, 30W Thermostatically controlled on at 40°F (4°C) and off at 60°F (15°C)
<b>Ceiling/Wall Adapter</b>	HKHS3024 HS3020CA	Same as HKHS3000 except 24 VAC Ceiling/wall adapter for HS3020 enclosure only. Includes knockouts on both sides for 3/4-inch (1.91 cm) or 1-inch (2.54 cm) conduit fittings
<b>Other</b>	AH300010025	Clear window, 0.25-inch (6.35 mm) thick Lexan®



HS3020CA CEILING ADAPTER



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



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## HS4012 Enclosure

### HIGH SECURITY, INDOOR, CEILING/WALL/PEDESTAL MOUNT

#### Product Features

- Indoor Applications
- Removable Camera Sled
- Two Conduit Knock-Out Holes for Cable Entry
- Tamper-Proof Fasteners
- Steel Construction (16-Gauge)
- Hinged Side Panels Allow Easy Access to Camera and Lens
- Wall, Ceiling, or Pedestal Mounting

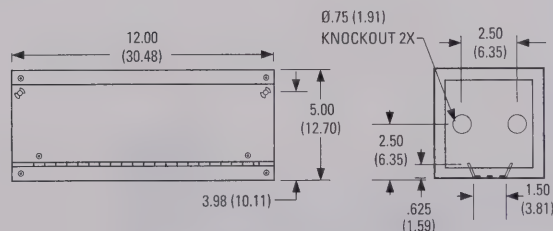
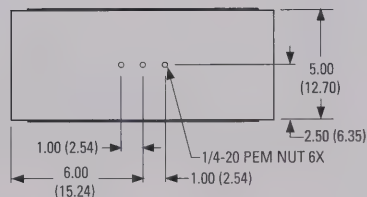


The **HS4012** is a high security enclosure designed to provide a high degree of protection against vandalism in such applications as correctional facilities, bus stations, schools, or other indoor applications.

Constructed of steel, this enclosure will accommodate camera and lens combinations up to 4.50" H x 4.50" W x 10.375" L (11.43 x 11.43 x 26.33 cm) and features an optically clear 0.25-inch (6.35 mm) thick impact-resistant Lexan® window.

The hinged side panels allow easy access to the camera and lens for servicing. Tamper-proof fasteners secure the side panels, thereby restricting access to unauthorized personnel.

Mounting holes in the top and bottom allow the enclosure to be used with a variety of mounts.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2488  
MANUAL: 24886

C488 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

HS4012 High security indoor camera enclosure

## MECHANICAL

Camera Mounting	Multiple holes on adjustable camera sled
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 4.50" H x 4.50" W x 10.375" L (11.43 x 11.43 x 26.33 cm)
Viewing Window Area	4.00" H x 4.00" W (10.16 x 10.16 cm)
Cable Entry	Two 0.75-inch (1.91 cm) knock-out holes on rear of enclosure
Security	Two tamper-resistant screws on each access door (hollow Allen wrench supplied)

\*Assumes lens is fully extended.

## GENERAL

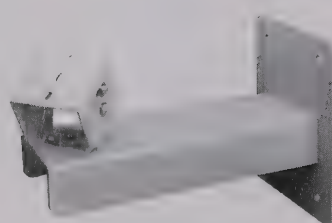
Front Window Construction	0.25-inch (6.35 mm) thick Lexan®
Finish	0.059-inch (1.49 mm) thick, 16-gauge steel
Environment	Gray polyester powder coat
Weight	Indoor; 32° to 120°F (0° to 49°C)
Shipping Weight	6.5 lb (2.95 kg)
	8 lb (3.62 kg)

## CERTIFICATIONS/RATINGS

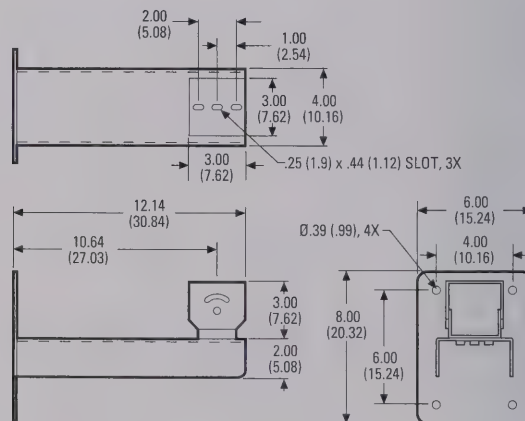
- UL Listed
- Meets NEMA Type 1 standards

## RECOMMENDED MOUNTS

Ceiling/ Pedestal	EM1009U,	Medium duty ceiling/pedestal mount;
	EM1015U	maximum load 40 lb (18.14 kg)
	MM22	Medium duty ceiling/pedestal mount;
Wall		maximum load 40 lb (18.14 kg)
	EM1400	Light duty wall mount; maximum load
		20 lb (9.07 kg)
	EM1900U	Medium duty wall mount; maximum
		load 40 lb (18.14 kg)
	EM22	Medium duty wall mount; maximum
Pipe/Pole		load 40 lb (18.14 kg)
	EM2400	Light duty wall mount; maximum load
		20 lb (9.07 kg)
	HSWM12	Medium duty high security wall mount
		with tamper proof hardware; maximum
		load 40 lb (18.14 kg)
Pipe/Pole	EM1109	Medium duty pedestal mount for
		horizontal or vertical pipe/pole
		applications; maximum load 40 lb
		(18.14 kg)
Pipe/Pole	EM2000	Medium duty mount for vertical pipe/
		pole applications; maximum load 40 lb
		(18.14 kg)
Pipe/Pole	EM2200	Medium duty mount for horizontal pipe/
		pole applications; maximum load 40 lb
		(18.14 kg)



HSWM12 WALL MOUNT



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



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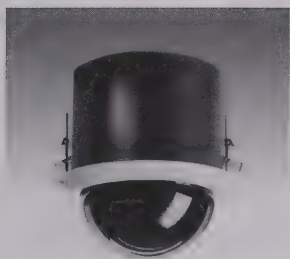


## FIXED DOMES

### For Discreet Surveillance Applications

#### Fixed Mount Domes

Pelco manufactures both in-ceiling and pendant domes designed to meet the requirements of many CCTV system applications. In-ceiling models may be installed in either suspended or hard ceilings. Pendant models mount directly to any recommended mount, flush to a ceiling, or to 1.5-inch NPT female threaded pipe. All outdoor pendant models are environmentally sealed to meet IP66 standards and include a sun shield and heater.



#### Fixed Mount Adapter for Spectra III™ Series Back Boxes

The DD5-FM allows a fixed mount option in any Spectra III Series back box. This fixed mount adapter can be quickly and easily interchanged with any Spectra III Series dome drive.

#### Create Your Own Dome System

DomePak® models with factory installed camera and lens packages are available. Refer to the DomePak selection guides in Camera Systems, ImagePak® for available models.

For high speed domes, see Camera Systems, Spectra® Series.

Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

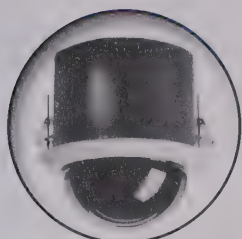
- Fixed Dome Selection Guide



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Spectra III™ is a trademark of Pelco.



# Fixed Dome Selection Guide



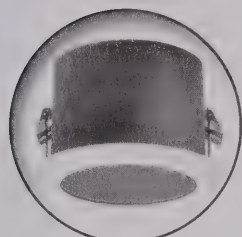
DF5



DF5HD



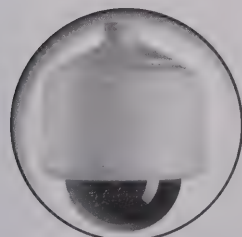
DF5-P



DF5-0F



DF8



DF8-P

## DF5 Series, 5-Inch Bubble

Type	Mount	Dome Color	Model Number	See Page
Indoor	In-Ceiling Dome	Smoked	DF5-0	205
		Clear	DF5-1	205
		Chrome	DF5-2	205
		Gold	DF5-3	205
	Heavy Duty, In-Ceiling	Clear	DF5HD-1	205
	In-Ceiling, Short Back Box	Smoked	DF5S-0	205
		Clear	DF5S-1	205
		Chrome	DF5S-2	205
		Gold	DF5S-3	205
	In-Ceiling, Flat Plate	Smoked	DF5-0F	205
		Clear	DF5-1F	205
	Pendant, Black	Smoked	DF5-PB-0	205
		Clear	DF5-PB-1	205
		Chrome	DF5-PB-2	205
	Pendant, Gray	Gold	DF5-PB-3	205
		Smoked	DF5-PG-0	205
		Clear	DF5-PG-1	205
	Heavy Duty, Pendant, Gray	Chrome	DF5-PG-2	205
		Gold	DF5-PG-3	205
		Clear	DF5HD-PG-1	205
Outdoor	Pendant, Gray	Smoked	DF5-PG-E0	205
		Clear	DF5-PG-E1	205
	Heavy Duty, Pendant, Gray	Clear	DF5HD-PG-E1	205

## DF8 Series, 8-Inch Bubble

Indoor	In-Ceiling	Smoked Bronze	DF8A	211		
		Smoked*	DF8A-0	211		
		Clear*	DF8A-1	211		
		Chrome	DF8A-2	211		
		Gold	DF8A-3	211		
		White**	DF8A-10	211		
Indoor	Pendant, Black	Smoked*	DF8-PB-0	211		
		Clear*	DF8-PB-1	211		
		Chrome	DF8-PB-2	211		
		Gold	DF8-PB-3	211		
	Pendant, Gray	Smoked*	DF8-PG-0	211		
		Clear*	DF8-PG-1	211		
		Chrome	DF8-PG-2	211		
		Gold	DF8-PG-3	211		
		Outdoor	Pendant, Gray	Smoked*	DF8-PG-E0	211
				Clear*	DF8-PG-E1	211

\*Indicates viewing window color only; bubble on these models is opaque black.  
 \*\*White bubble has clear viewing window.



## DF5 Series Fixed Mount Dome

### 5-INCH, INDOOR/OUTDOOR, CEILING/PENDANT, STANDARD/HEAVY-DUTY

#### Product Features

- 5.9-Inch Acrylic Bubble
- Plenum-Rated Back Box
- Cosmetically Matches Spectra® Dome
- Indoor and Environmental Models Available
- Hard Ceiling and Suspended Ceiling Applications
- Versatile and Adjustable Fixed Camera Mount Bracket
- Environmentally Sealed and Weatherized Pendant Models Available for Use in Temperatures to -60°F (-51°C)
- Pendant Models Meet NEMA Type 4X, IP66 Standards
- Heavy-Duty Models
  - Tough, Reinforced Construction
  - 0.090-Inch Injection-Molded Polycarbonate Bubble
  - Barrel-Type Key Locks



HEAVY-DUTY IN-CEILING MODEL  
DF5HD-1

PENDANT MODEL DF5-PG-0  
(SHOWN WITH SWM-GY WALL MOUNT)

Pelco's **DF5 Series** is a low profile, fixed mount, dome for in-ceiling or pendant applications. The dome is easy to install and features a versatile fixed camera mount that allows for 360 degree camera positioning. Standard and tamper/impact-resistant (heavy-duty) models are available. Heavy-duty models are ideal for installations where structural integrity and resistance to vandalism are a priority.

**DF5 Series** in-ceiling models are available with a standard (DF5), shortened (DF5S), or heavy-duty (DF5HD) back box. The standard and shortened back box models can be installed in a hard ceiling or standard suspended ceiling. The shortened back box version can also be mounted directly to a hard ceiling using an optional bezel to conceal the back box for a seamless installation. The heavy-duty model should only be installed in a fixed ceiling to optimize the integrity of the vandal-resistant design.

The **DF5 Series** pendant models mount directly to any recommended mount, flush to a ceiling, or to 1.5-inch NPT female threaded pipe and

are available for indoor and environmental applications. All environmental versions include a sun shield and heater kit and are suitable for use in temperatures to -60°F (-51°C). Heavy-duty pendant models (DF5HD-PG) are strengthened by a thicker sun shroud and dual wall construction.

A variety of lower domes are available for this series. Standard and shortened back box models are equipped with an acrylic bubble; available colors include smoked, clear, chrome, or gold. The standard back box is also available with a flat acrylic window for use in applications where overhead space is minimal. Flat window colors are clear or smoked. All heavy-duty domes feature a clear polycarbonate bubble, 0.090-inch thick, which provides an optimum combination of strength and optical clarity.

**DF5 Series** options include an aluminum ceiling panel (SD5-P) for suspended ceiling applications, a pendant conduit adapter (BB5-PCA-BK or BB5-PCA-GY), and dome liner kit (DF5LINERKIT).



DataFAX

SPEC: 21458

MANUAL: 214586 (DF5), 214756 (DF5S), 214816 (DF5-OF/-1F), 224326 (DF5HD)

C1458 / REVISED 10-03

IP66



International Organization  
for Standardization  
Registered ISO 9001



## MECHANICAL

Cable Entry 0.75-inch conduit fitting

## GENERAL

Maximum Camera and Lens Size

DF5, DF5S, and DF5HD (Including BNC connector)\*  
5.00" L x 2.75" W x 2.75" H  
(12.70 x 6.99 x 6.99 cm)  
DF5-OF/DF5-1F (Including mini BNC connector)  
4.5" L x 2.75" W x 2.75" H  
(11.43 x 6.99 x 6.99 cm)

Construction

Back Box Aluminum

Mounting Bracket Steel

Bubble

DF5 and DF5S Acrylic (smoked, clear, chrome or gold)  
DF5HD Series Clear polycarbonate bubble, 0.090-inch thick  
DF5-OF Smoked acrylic flat window, 0.06-inch thick  
DF5-1F Clear acrylic flat window, 0.06-inch thick

Unit Weight

DF5 Series 2.80 lb (1.27 kg)

DF5S Series 2.65 lb (1.20 kg)

DF5HD Series 3.77 lb (1.71 kg)

DF5-OF/DF5-1F 2.65 lb (1.20 kg)

Shipping Weight

DF5 Series 6.0 lb (2.72 kg)

DF5S Series 5.0 lb (2.27 kg)

DF5HD Series 7.0 lb (3.18 kg)

DF5-OF/DF5-1F 6.0 lb (2.72 kg)

\*Assumes lens is fully extended.

## ENVIRONMENTAL

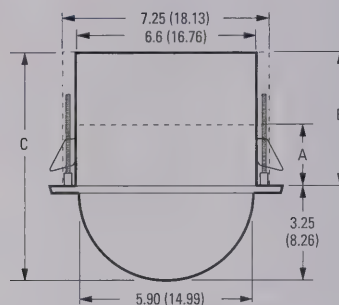
Environment Indoor only

Operating Temperature 32° to 122°F (0° to 50°C)

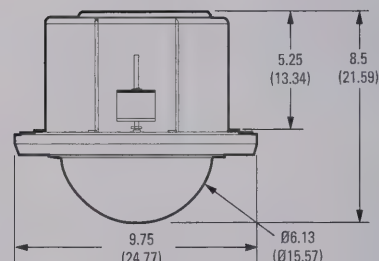
## CERTIFICATIONS/RATINGS

- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 1 and IP20 standards

LETTER	MODEL	DIMENSION
A	DF5S SERIES	2.75 (6.99)
B	DF5 SERIES	5.25 (13.34)
C	DF5-OF/DF5-1F	5.60 (14.22)



STANDARD IN-CEILING DOME



HEAVY-DUTY IN-CEILING DOME

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



# TECHNICAL SPECIFICATIONS, PENDANT DOMES

## MECHANICAL

Cable Entry Through 1.5-inch NPT pendant mount

## ELECTRICAL

Input Voltage 24 VAC (environmental models only)  
Input Power 62 VA (for heater)

## GENERAL

Maximum Camera and Lens Size (Including BNC connector)\*  
5.00" L x 2.75" W x 2.75" H  
(12.70 x 6.99 x 6.99 cm)

Construction  
Back Box Aluminum  
Mounting Bracket Steel  
Bubble  
DF5-PG Series Acrylic (smoked, clear, chrome or gold)  
DF5HD-PG Series Clear polycarbonate, 0.090-inch thick

Unit Weight  
DF5-PG Series  
Indoor 4.23 lb (1.93 kg)  
Outdoor 5.75 lb (2.61 kg)  
DF5HD-PG Series  
Indoor 6.28 lb (2.85 kg)  
Outdoor 6.58 lb (2.98 kg)

Shipping Weight  
DF5-PG Series  
Indoor 8.0 lb (3.63 kg)  
Outdoor 10.0 lb (4.54 kg)  
DF5HD-PG Series  
Indoor 13.0 lb (5.90 kg)  
Outdoor 14.0 lb (6.35 kg)

\*Assumes lens is fully extended.

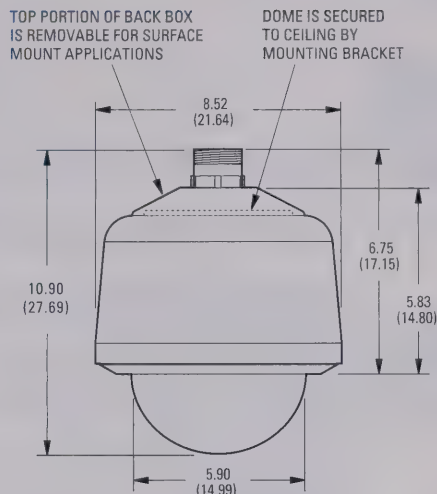
## ENVIRONMENTAL

Environment Indoor or outdoor (model dependent)  
Operating Temperature  
Indoor 32° to 122°F (0° to 50°C)  
Outdoor\*\* -60° to 122°F (-51° to 50°C) continuous operation  
-50° to 122°F (-45° to 50°C) continuous operation; prevents icing  
-40° to 122°F (-40° to 50°C) continuous operation; de-ices (within 3 hours) after power-up

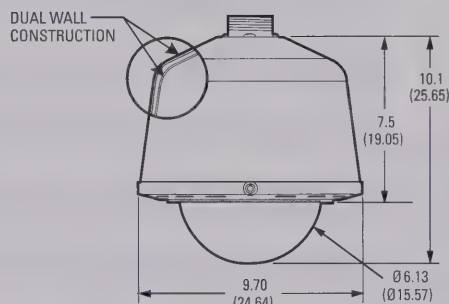
\*\*Assumes no wind chill factor.

## CERTIFICATIONS

- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 4 and IP66 standards



STANDARD PENDANT DOME



HEAVY-DUTY PENDANT DOME

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## MODELS



DF5 SERIES



DF5S



DF5S SERIES



DF5-PG-0  
(SHOWN WITH  
SWM-GY  
WALL MOUNT)

Model	In-Ceiling	Surface Mount	Pendant	Indoor	Outdoor	Standard Back Box	Heavy-duty Back Box	Shortened Back Box	Standard Bubble	Heavy-duty Bubble	Flat Window	Heater	Sun Shield	Color	Bubble				Bubble Attributes
															Smoked	Clear	Chrome	Gold	
DF5-0	•			•		•			•						•				1/2 f-stop light loss
DF5-1*	•			•		•			•							•			Virtually no light loss
DF5HD-1	•			•			•			•						•			
DF5-2	•			•		•			•								•		2 f-stop light loss
DF5-3	•			•		•			•									•	2 f-stop light loss
DF5-0F	•			•		•					•				•				1/2 f-stop light loss
DF5-1F	•			•		•					•					•			Virtually no light loss (includes opaque liner)
DF5S-0	•	***		•				•	•						•				1/2 f-stop light loss
DF5S-1	•	***		•				•	•								•		Virtually no light loss (includes opaque liner)
DF5S-2	•	***		•				•	•									•	2 f-stop light loss
DF5S-3	•	***		•				•	•									•	2 f-stop light loss
DF5-PB-0			•	•					•					Black	•				1/2 f-stop light loss
DF5-PB-1			•	•					•					Black		•			Virtually no light loss (liner not included)
DF5-PB-2			•	•					•					Black			•		2 f-stop light loss
DF5-PB-3			•	•					•					Black				•	2 f-stop light loss
DF5-PG-0			•	•					•					Gray	•				1/2 f-stop light loss
DF5-PG-1			•	•					•					Gray		•			Virtually no light loss
DF5HD-PG-1			•	•			•			•				Gray		•			(liner not included)
DF5-PG-2			•	•					•					Gray			•		2 f-stop light loss
DF5-PG-3			•	•					•					Gray				•	2 f-stop light loss
DF5-PG-E0			•	•					•			•	•	Gray	•				1/2 f-stop light loss
DF5-PG-E1			•	•					•			•	•	Gray		•			Virtually no light loss
DF5HD-PG-E1			•	•			•		•	•				Gray		•			(liner not included)

**Note:** DomePak® models with factory-installed and back-focused camera and lens packages are available. Please refer to the DF5 Series Selection Guide or DF5 Series DomePak® specification sheet for available models.

\*DF5-1 includes opaque liner.

\*\*Requires DF5S-SMKIT.

## RECOMMENDED MOUNTS

### IN-CEILING DOMES

DF5S-SMKIT

Surface mount adapter kit for DF5S Series with short back box. Includes bezel and hardware.

SCA1

Support rails; for use in suspended ceiling applications where additional support is needed.

SD5-P

2' x 2' (61 x 61 cm) drop ceiling panel, aluminum construction. Replaces 2' x 2' ceiling tile

### PENDANT DOMES

IWM Series

Wall mount with cable feedthrough. Can be adapted for corner, parapet or pole applications.

PP4348

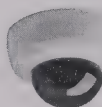
Parapet mount

PP350/PP351

Parapet mount

SWM Series

Compact wall mount. Can be adapted for corner or pole applications.



## RECOMMENDED POWER SUPPLIES

MCS Series

WCS Series

Multiple 24 VAC camera power supply, indoor  
Single/multiple 24 VAC camera power supply, outdoor

## OPTIONAL ACCESSORIES

BB5-PCA-BK

Pendant conduit adapter, black

BB5-PCA-GY

Pendant conduit adapter, gray

DF5LINERKIT

Slotted liner kit. Can be added to any dome. (Included with clear in-ceiling domes only.)

SD5-SS

Sun shield, gray



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# DD5-FM Dome Mount

## FIXED CAMERA MOUNT FOR SPECTRA III™ SERIES

### Product Features

- Fits All Spectra III™ and Spectra III SE Back Boxes
- Quick Electrical and Mechanical Connections to Back Box
- Adjustable Mounting Bracket for Fixed Camera
- Prewired for Camera Video and Power
- Interchangeable with Spectra III Pan/Tilt Dome Drives



(CAMERA AND LENS NOT SUPPLIED)

The **DD5-FM** is a fixed camera mount that can be installed in any Spectra III™ Series back box. This makes it ideal for applications that require specialty back boxes, such as pressurized or stainless steel, which are now available in the Spectra III Series.

The **DD5-FM** snaps into place in the back box exactly the same as Spectra III Series' regular pan/tilt dome drive, making the **DD5-FM** just as quick and easy to install and remove. And, because the back box connections are the same, the **DD5-FM** can be exchanged with a pan/tilt dome drive if camera requirements change.

Pelco's compact cameras—the MCC1370H-2 and CCC1370H-2 Series—are suited for the **DD5-FM**. The camera bracket has pan and tilt adjustments to set the camera for the desired viewing angle. The **DD5-FM** is prewired with a video cable and a pair of power wires to make video and 24 VAC power connections to the camera simple and easy. Once installed, the camera does not need to be removed from the **DD5-FM** if it is necessary to take the camera mount out of the Spectra III back box.

FIXED DOMES,  
DD5-FM



DataFAX

SPEC: 21461

MANUAL: 214616

C1461 / NEW 10-03

International Organization  
for Standardization  
Registered ISO 9001





## MODEL

DD5-FM Fixed camera mount for Spectra III back box

## ELECTRICAL

Camera Voltage 18-30 VAC; 24 VAC nominal

Camera Connections

Video

BNC

Power

2 wires, 26 AWG

## GENERAL

Maximum

Camera/Lens Size

Accepts camera and lens combinations\* including BNC connector up to 5.00" L x 2.75" W x 2.75" H (12.70 x 6.99 x 6.99 cm)

Pan Adjustment

360°

Tilt Adjustment

90°

Construction

Polymer plastic and aluminum

Unit Weight

1.2 lb (0.5 kg)

Shipping Weight

3 lb (1.35 kg)

\*Assumes lens is fully extended.

## COMPATIBLE SPECTRA COMPONENTS

To order a fixed mount dome system, order the DD5-FM fixed camera mount plus a back box and lower dome.

Back Box			Lower Dome	
Spectra III	BB53T-SMW	Surface mount, white	LD53SMW-0	Smoked bubble, white trim ring
			LD53SMW-1	Clear bubble, white trim ring
			LD53SMW-2	Chrome bubble, white trim ring
			LD53SMW-3	Gold bubble, white trim ring
Spectra III SE	BB53-SMW	Surface mount, white		
Spectra III	BB53T-SMB	Surface mount, black	LD53SMB-0	Smoked bubble, black trim ring
			LD53SMB-1	Clear bubble, black trim ring
			LD53SMB-2	Chrome bubble, black trim ring
			LD53SMB-3	Gold bubble, black trim ring
Spectra III SE	BB53-SMB	Surface mount, black		
Spectra III	BB53T-F	In-ceiling, standard	LD5F-0	Smoked bubble, white trim ring
			LD5F-1	Clear bubble, white trim ring
			LD5F-2	Chrome bubble, white trim ring
			LD5F-3	Gold bubble, white trim ring
Spectra III SE	BB53-F	In-ceiling, standard		
Spectra III	BB53T-F-E	In-ceiling, environmental		
	BB53T-PB	Pendant, black, standard	LD53PB-0	Smoked bubble, black trim ring
	BB53T-PG	Pendant, gray, standard	LD53PB-1	Clear bubble, black trim ring
	BB53T-PG-E	Pendant, gray, environmental	LD53PB-2	Chrome bubble, black trim ring
			LD53PB-3	Gold bubble, black trim ring
Spectra III SE	BB53-F-E	In-ceiling, environmental		
	BB53-PB	Pendant, black, standard		
	BB53-PG	Pendant, gray, standard		
	BB53-PG-E	Pendant, gray, environmental		
Spectra III and Spectra III SE Heavy Duty	BB53HD-F	In-ceiling, standard	LD53HDF-1	Clear bubble, gray trim ring
			LD53HDCF-1	Clear bubble with cage, gray trim ring
	BB53HD-PG	Pendant, gray, standard	LD53HDPB-1	Clear bubble, black trim ring
	BB53HD-PG-E	Pendant, gray, environmental	LD53HDCPB-1	Clear bubble with cage, black trim ring
Spectra III and Spectra III SE Stainless Steel	BB53-PSG-E	Pendant, gray, environmental	LD53PSB-0	Smoked bubble, black trim ring
			LD53PSB-1	Clear bubble, black trim ring
Spectra III and Spectra III SE Pressurized	BB53-PR-E	Pendant, gray, environmental	LD53PR-0	Smoked bubble, black trim ring
	BB53-PRS-E	Pendant, gray, environmental, single mode fiber optic	LD53PR-1	Clear bubble, black trim ring
	BB53-PRM-E	Pendant, gray, environmental, multimode fiber optic		

FIXED DOMES.  
DD5-FM



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## DF8 Series Fixed Mount Dome

### 8-INCH, INDOOR/OUTDOOR, CEILING/PENDANT

#### Product Features

- Low Cost
- Indoor/Outdoor Applications
- Quick and Easy to Install; Hole-Scribing Tool Included for In-Ceiling Models
- Versatile and Adjustable Fixed Camera Mount Bracket
- For Use in Hard Ceiling, Suspended Ceiling or Pendant Applications
- As Little as 5.2 Inches (13.2 cm) of Overhead Ceiling Space Required for In-Ceiling Models
- Optional Support Rails Available for Suspended Ceiling Applications
- Cosmetically Matches Spectra® Dome
- Outdoor Pendant Models Sealed and Weatherized for Use in Temperatures to -60°F (-51°C)

The **DF8 Series** are 8-inch, fixed mount domes that are quick and easy to install and can be used in a variety of indoor/outdoor applications.

The versatile fixed camera mount allows for 360-degree horizontal positioning and will accommodate a camera and lens up to nine inches (22.86 cm) in length when tilted 30 degrees downward.

The lower dome, which is 8.5 inches (21.59 cm) in diameter, is easily removed for quick access to the camera.

The **DF8 Series** in-ceiling models can be installed in hard ceilings or standard 2' x 2' (61 x 61 cm) suspended ceilings. This compact dome requires as little as 5.2 inches (13.2 cm) of overhead space above the ceiling for installation. The back box is formed aluminum construction and is plenum rated. Multiple cable hole plugs are positioned in the top and sides of the back box and can be removed to allow cable to be run from any direction.

The **DF8 Series** feature an acrylic bubble which is available in six types: smoked bronze (in-ceiling model only), black opaque with smoked window, black opaque with clear window, chrome, gold, and white with clear window (in-ceiling model only).

The **DF8 Series** pendant models mount directly to any recommended mount, flush to a ceiling, or to 1.5-inch NPT female pipe threads. They are available in a black or gray finish for indoor applications or gray only for environmental applications. The environmental domes include a sun shield and heater kit and are suitable for use in temperatures to -60°F (-51°C).

Optional wall/ceiling mounts are available for the pendant models.

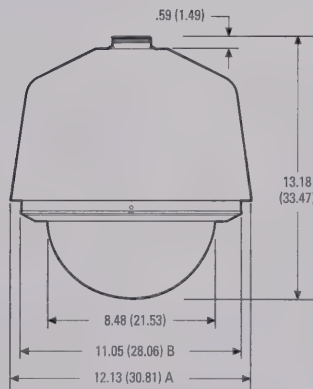


IN-CEILING MODEL DF8A



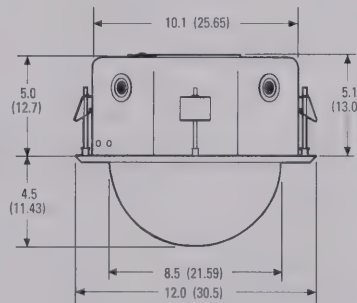
PENDANT MODEL DF8-PG-0  
SHOWN WITH IWM-GY WALL MOUNT

PENDANT  
DF8 SERIES  
DIMENSION  
DRAWING



A - OUTDOOR MODELS WITH SUN SHIELD  
B - INDOOR MODELS WITHOUT SUN SHIELD

IN-CEILING  
DF8A SERIES  
DIMENSION  
DRAWING



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21448

MANUAL: 214486 (In-Ceiling Models), 224336 (Pendant Models)

C1448 / REVISED 10-03

IP66



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

Model Number	In-ceiling	Pendant	Indoor	Outdoor	Color		Bubble
					Black	Gray	
DF8A	•		•				Smoked bronze, 1 f-stop light loss
DF8A-0	•		•				Opaque black, smoked window, 1/2 f-stop light loss
DF8A-1	•		•				Opaque black, clear window, zero light loss
DF8A-2	•		•				Chrome, 2 f-stops light loss
DF8A-3	•		•				Gold, 2 f-stops light loss
DF8A-10	•		•				Opaque white, clear window, zero light loss
DF8-PB-0		•	•		•		Opaque black, smoked window, 1/2 f-stop light loss
DF8-PB-1		•	•		•		Opaque black, clear window, zero light loss
DF8-PB-2		•	•		•		Chrome, 2 f-stops light loss
DF8-PB-3		•	•		•		Gold, 2 f-stops light loss
DF8-PG-0		•	•			•	Opaque black, smoked window, 1/2 f-stop light loss
DF8-PG-1		•	•			•	Opaque black, clear window, zero light loss
DF8-PG-2		•	•			•	Chrome, 2 f-stops light loss
DF8-PG-3		•	•			•	Gold, 2 f-stops light loss
DF8-PG-E0		•		•		•	Opaque black, smoked window, heater and blower, 1/2 f-stop light loss
DF8-PG-E1		•		•		•	Opaque black, clear window, heater and blower, zero light loss

**Note:** DomePak® models with factory-installed and back-focused camera and lens packages are available. Please refer to the DF8 Series Selection Guide or contact the factory for available models.

## MECHANICAL

Cable Entry  
In-Ceiling

0.875-inch (2.22 cm) knockouts positioned in top and sides of back box  
Through top of dome

Pendant  
Maximum Camera  
and Lens Size

The following dimensions are specified according to fixed camera mount position and include allowance for the BNC connector. Actual length may vary if width and height of camera and lens are different.

### In-Ceiling

Horizontal	7.5" L x 2.75" W x 2.6" H (19.05 x 6.99 x 6.60 cm)
15 Degree Angle	8.0" L x 2.75" W x 2.6" H (20.32 x 6.99 x 6.60 cm)
30 Degree Angle	9.0" L x 2.75" W x 2.6" H (22.86 x 6.99 x 6.60 cm)

### Pendant

Horizontal	7.5" L x 2.75" W x 2.6" H (19.05 x 6.99 x 6.60 cm)
15 Degree Angle	8.0" L x 3.0" W x 3.0" H (20.32 x 7.62 x 7.62 cm)
30 Degree Angle	9.0" L x 3.0" W x 3.0" H (22.86 x 7.62 x 7.62 cm)

## GENERAL

Environment  
Construction  
Back Box  
Bubble  
Trim Ring  
Finish

Indoor/outdoor  
Aluminum  
Acrylic plastic  
Aluminum  
Polyester powder coat (pendant models)

### Operating Temperature

Indoor	32° to 120°F (0° to 49°C)
Outdoor*	-60° to 122°F (-51° to 50°C) in continuous operation -50° to 122°F (-46° to 50°C) in continuous operation; prevents icing -40 to 122°F (-40° to 50°C) in continuous operation; de-ices within 3 hours after power-up

\*Assumes no windchill factor.

### Weight

	Unit	Shipping
In-Ceiling	3.1 lb (1.4 kg)	6 lb (2.72 kg)
Pendant		
Indoor	6.0 lb (2.72 kg)	10 lb (4.5 kg)
Outdoor	8.5 lb (3.85 kg)	13 lb (5.8 kg)

## ELECTRICAL

Input Voltage	14-30 VAC (outdoor models only)
Power Requirements	92 VA at 24 VAC

## CERTIFICATIONS

- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 4X and IP66 standards

## OPTIONAL ACCESSORIES

DF8A-R	Two 26-inch (66.04 cm) aluminum support rails for mounting DF8A Series dome in suspended ceiling. (Can also be used for additional support in hard ceiling applications.)
--------	---

## RECOMMENDED MOUNTS

DF8A-P	2' x 2' (61 x 61 cm) aluminum faceplate for suspended ceiling applications. Replaces existing ceiling tile.
IWM Series	Wall mount, black or gray, with or without 24 VAC, 100 VA transformer, for use with pendant models.
MRCA	Black ceiling mount adapter for pendant models.
MRWA	Black wall mount adapter for pendant models.

Indicates change or addition.



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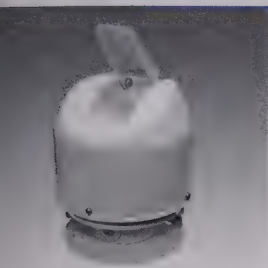
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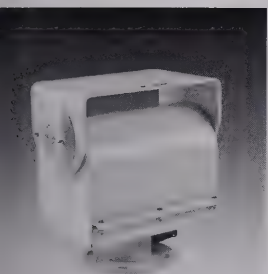
## SCANNERS, PAN/TILTS

### Surveillance Positioning Devices

A scanner is a low cost positioning unit that only moves from side-to-side (pan). Pelco scanners feature camera-mounting tables with manually adjustable tilt ranges. Units also feature manually adjustable limit stops allowing the camera to rotate past 360 degrees to 380 degrees before reversing direction.

A remote controlled positioning unit capable of vertical (pan) and horizontal (tilt) motion is referred to as a pan/tilt unit. Pan/tilts range from light duty to heavy duty, and from indoor-only to outdoor models. Units can be configured to fulfill the requirements of many special applications and are capable of auto/random scan operation when used with an appropriate control.

Note: For fully integrated pan/tilt positioning systems, including optics package, see **Esprit®** in the *Camera Systems* section of this book.



#### Legacy®

The Legacy integrated system is an innovative arrangement of "building block" components designed to simplify installation and system design. System components include an enclosure, pan/tilt, receiver and wall mount. The Legacy is capable of 355-degree or continuous 360-degree pan rotation and fixed or variable pan speed, depending on model. Units are available with optional heater, defroster, blower, thermal insulation, and sun shroud.

#### Indoor

Pelco's indoor pan/tilts are ideal for basic, low cost installations. Maximum load capacity varies per model and ranges up to 15 pounds.

#### Outdoor

Pelco has a complete product line of medium-to-heavy-duty scanners and pan/tilts for outdoor applications. Models include an explosionproof pan/tilt, rated for Class II, Division I hazardous locations. Maximum load requirements vary per model and ranges from 35 pounds up to 100 pounds.

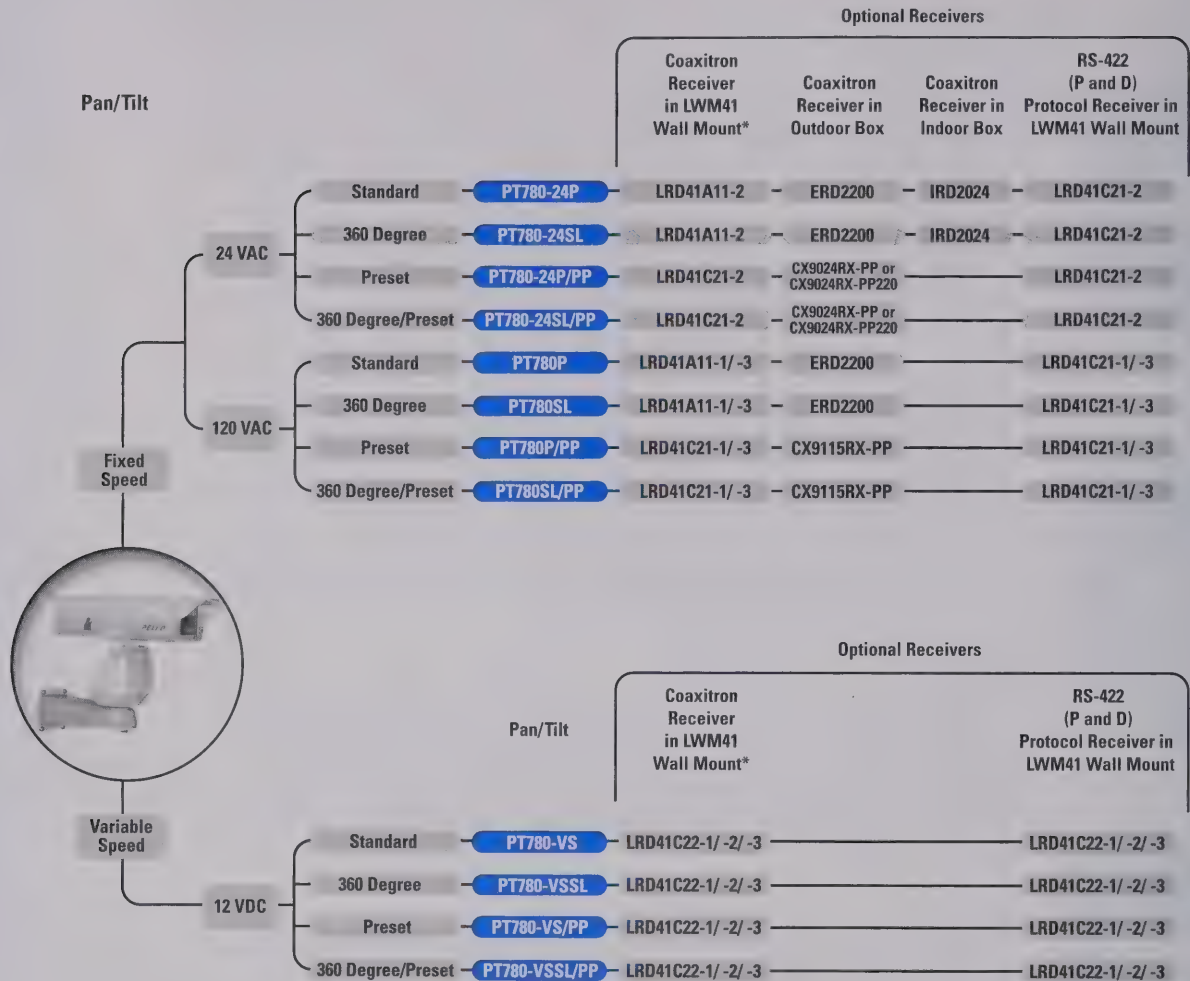


When choosing a Pelco positioning system, consider the maximum load the unit is capable of handling. The total weight of the camera and lens package, plus the enclosure and any accessories must be calculated. Refer to the specification sheets and choose a unit that exceeds your calculated weight.

Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

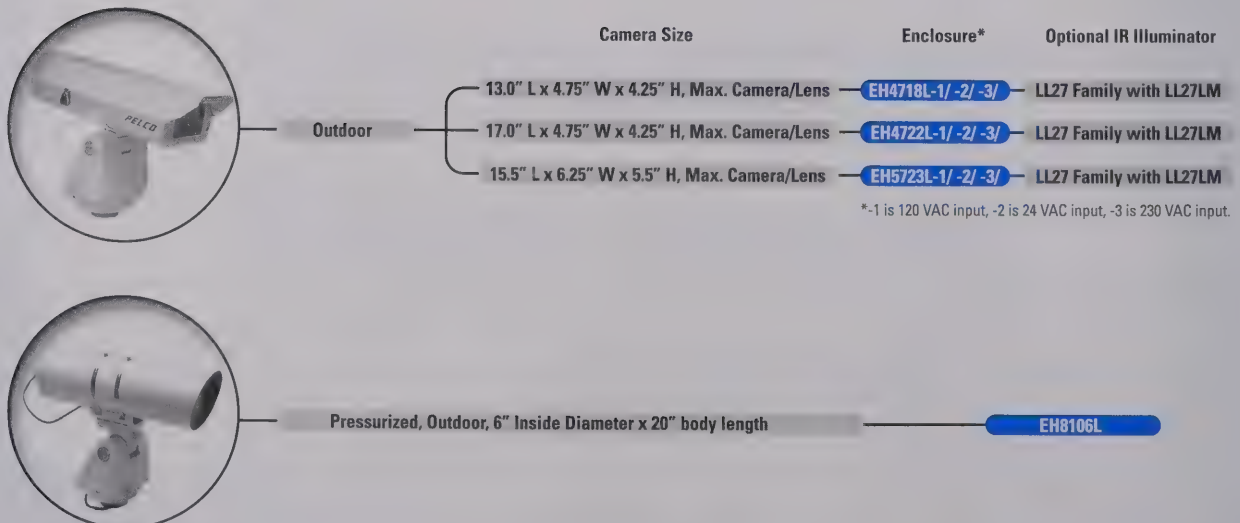
- Legacy Pan/Tilt/Enclosure Selection Guide
- Indoor Pan/Tilt Selection Guide
- Outdoor Scanner, Pan/Tilt Selection Guide

When using the following selection guide, first determine pan/tilt to be used and then select the enclosure.  
For applications not requiring large cameras, see Esprit integrated positioning systems in the Camera Systems section of this book.



\*-1 is 120 VAC input, -2 is 24 VAC input, -3 is 230 VAC input.  
See specific receiver specification sheet for camera voltage requirements.

## Enclosure

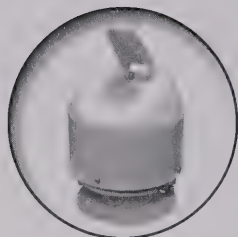




P270P  
Pan/Tilt

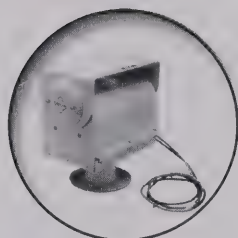
Model	Type	Recommended Enclosures		Recommended Mounts		See Page
		EH3010	EH3014	PM14 (Wall)	PM105 (Wall)	
PT270P	Light Duty	✓		✓	✓	225
PT270-24P	Light Duty	✓		✓	✓	225
PT270P/230	Light Duty	✓		✓	✓	225
PT280-24P	Light Duty	✓	✓	✓	✓	227





**PS20**  
Scanner

Model	Type	Recommended Enclosures						Recommended Mounts				See Page
		EH3500 Series	EH4700 Series	EH5700 Series	E706 Series	EH8100 Series	EHX*E Series	PSWM (Wall)	WM2000 (Wall)	WM3026 (Wall)	PM2010 PM2000 (Pedestal)	
PS20	Medium Duty	✓						✓			✓	229
PS20-24	Medium Duty	✓						✓			✓	229
PS20/230	Medium Duty	✓						✓			✓	229



**PT680-24P**  
Pan/Tilt

PT570P	Medium Duty	✓	✓	✓	✓	✓			✓*		✓	231
PT570-24P	Medium Duty	✓	✓	✓	✓	✓			✓*		✓	231
PT680-24P	Medium Duty	✓	✓	✓	✓	✓			✓*		✓	233
PT1250DC	Heavy Duty			✓	✓	✓			✓**	✓	✓	235
PT1250P	Heavy Duty			✓	✓	✓			✓**	✓	✓	237
PT1280P	Heavy Duty			✓	✓	✓			✓**	✓	✓	239
PT1280SL	Heavy Duty			✓	✓	✓			✓**	✓	✓	239
PT1260EX	Explosion-Proof						✓		✓**	✓	✓	241

\*Requires PA2000 adapter. (For additional support, also use ST1 strut.)

\*\*Requires PA2010 adapter and ST1 strut.

## Legacy® Series Integrated Positioning System

### MEDIUM DUTY, INDOOR/OUTDOOR, COAXITRON® COMPATIBLE

#### Product Features

- Indoor/Outdoor Operation
- RediLINK® Quick-Connect Feature
- Delrin® Worm Gear Drives
- Optional Preset Positioning and 360° Pan Rotation
- Gold-Plated Pin Connectors Ensure Reliable Contact
- Prewired, Internal Feedthrough
- Easily Removed Clamshell Covers
- Bottom-opening Wall Mount Houses Integral Receiver
- Receiver Offers Adjustable Lens Voltages, Selectable Camera Voltages NTSC or PAL Video, Transient Suppression Circuit Protection, and Auto/Random Scan as Standard Features



LEGACY PT780 PAN/TILT  
AND EH4718L ENCLOSURE

The **Legacy® Series** is an innovative system of "building block" components designed to simplify installation and system design. System components include an enclosure, pan/tilt, receiver, and wall mount.

The mechanical and electrical components of the **Legacy Series** feature RediLINK® quick-connectors making assembly fast and effortless. It's so easy, the basic system can be assembled in a matter of minutes.

Select the **Legacy** model pan/tilt and enclosure to create the basic system. Then, select an appropriate receiver and mount to complete the system package. Models are available with optional heater, defroster, blower, thermal insulation, and sun shroud.

The **Legacy Series** pan/tilt is capable of handling loads up to 52 pounds (23.6 kilograms) and features gold-plated electrical pin connectors to ensure reliable contact and smooth operation. The pan/tilt also features a Delrin® worm gear that requires no lubrication, is corrosion-resistant, and ensures long life. Limit stops are internally adjustable. Available in fixed or variable speed models, options for the pan/tilt include preset positioning, heater blanket, and 360-degree pan positioning. The pan/tilt is prewired for internal feedthrough for all enclosure and camera functions.

The **Legacy** enclosure features a rear-opening, front-hinged lid with gas strut, adjustable camera sled, tilt table, blower, and heater. Enclosure options include defroster, thermal insulation, and sun shroud.

The receivers in the **Legacy Series** have a simple three-wire power connection with on/off switch that supplies power to the entire system. Choose from fixed or variable speed models, with or without presets, for 120/24/230 VAC applications. All models are compatible with Coaxitron® control systems and Pelco RS-422 control systems utilizing D or P type protocols.

The **Legacy** wall mount is constructed from aluminum and meets NEMA Type 4 standards. The mount opens from the bottom for easy access and installation of the **Legacy Series** receiver. The mount can also be used for pole, corner, and parapet applications when used with the appropriate adapter.

An optional infrared illuminator is available for nighttime viewing.



DataFAX  
SPEC: 2342

MANUAL: 214156 (EH4700L Series), 214226 (EH5700L Series), 23426 (PT780)

C342 / REVISED 10-02

IP66



U.S. Patent #307,915, #340,940, #5,224,675

International Organization  
for Standardization  
Registered ISO 9001



## Pan/Tilt MECHANICAL

Pan Rotation	Movement in horizontal plane: 0-355° 0-360° (SL models only)
Pan Speed	
VS models only:	1-17°/sec ±1° (maximum load condition)
All others:	9°/sec ±1°
Tilt Rotation	90° down from horizontal; 60° up from horizontal
Tilt Speed	
VS models only:	1-4°/sec ±0.5° (maximum load condition)
All others:	3°/sec ±0.5°
Torque Output	
VS models only:	18.3 ft-lbs (24.8 N•m) at rated voltage and 75°F (23°C)
All others:	23.8 ft-lbs (32.3 N•m) at rated voltage and 75°F (23°C)
Maximum Load	
VS models only:	40 lbs (18.14 kg) at specified torque
All others:	52 lbs (23.55 kg) at specified torque
Pan/Tilt Drive System	Delrin® worm gear; ground and polished stainless steel worm
Pan/Tilt Bearings	Roller thrust bearings and bronze Oilite bushings
Lubricants	
Bearings	NLGI #2; lithium complex grease fortified with molybdenum
Chain	Teflon chain lubricant, such as Tri-Flow
Braking	Friction

## ELECTRICAL

Input Voltage	120 VAC or 24 VAC, 50/60 Hz
12 VDC (VS models)	
VA Required	(At specified input voltage)
	120 VAC      24 VAC      12 VDC
Pan	19.2 VA (.16A)      21.6 VA (.9A)      17.04 VA (1.42A)
Tilt	32.4 VA (.27A)      24 VA (1A)      12.48 VA (1.04A)
Total	51.6 VA (.43A)      45.6 VA (1.9A)      29.52 VA (2.46A)
Maximum Current	2 amps per conductor (SL models only)
Connectors	Amp CPC type, mate supplied (37 pins)
Motor Type	
VS models only:	12 VDC continuous duty. DC permanent magnet
All others:	Single phase, instantaneous reversing, induction type. 120 VAC or 24 VAC, 50/60 Hz, impedance protected. 50% duty cycle; 30 minute rating
Limit Switches	5 amp, 250 VAC maximum; internal adjustment
Pan/Tilt Conductor Requirements	
Standard model	20 unshielded, plus video & camera sync coax*
Standard with/PP	27 unshielded, plus video & camera sync coax*
Standard with/SL	14 unshielded, plus video & camera sync coax*
Standard with SL/PP	20 unshielded, plus video & camera sync coax*

\*Including safety ground

**Note:** Two additional conductors may be required with /HB option.

### Note:

Presets are a function of the receiver. At this time, each pan/tilt with preset option is capable of 32 presets (first 8 are alarming) when used with a Coaxitron matrix control and compatible preset receiver.

### Cable Distances\*\*

PT780P Series	6 Conductors	7 Conductors***
20 AWG (0.5 mm <sup>2</sup> )	1,370 ft (417 m)	2,745 ft (836 m)
18 AWG (1.0 mm <sup>2</sup> )	2,180 ft (664 m)	4,370 ft (1,331 m)
16 AWG (1.5 mm <sup>2</sup> )	3,470 ft (1,057 m)	6,940 ft (2,115 m)
PT780-24P Series		
20 AWG (0.5 mm <sup>2</sup> )	59 ft (17.98 m)	118 ft (35.96 m)
18 AWG (1.0 mm <sup>2</sup> )	94 ft (28.65 m)	188 ft (57.30 m)
16 AWG (1.5 mm <sup>2</sup> )	149 ft (45.41 m)	298 ft (90.83 m)
PT780-VS Series	5 Conductors	
20 AWG (0.5 mm <sup>2</sup> )	24 ft (7.3 m)	
18 AWG (1.0 mm <sup>2</sup> )	38 ft (11.58 m)	
16 AWG (1.5 mm <sup>2</sup> )	60 ft (18.28 m)	

\*\*Cable distances are based on:

- 26.4 volts AC output voltage from controller (24 VAC models) or 132 volts AC output voltage from controller (120 VAC models) or 12 VDC output voltage from controller (12 VDC models) and
- 10% cable loss with both motors (pan/tilt) running simultaneously.

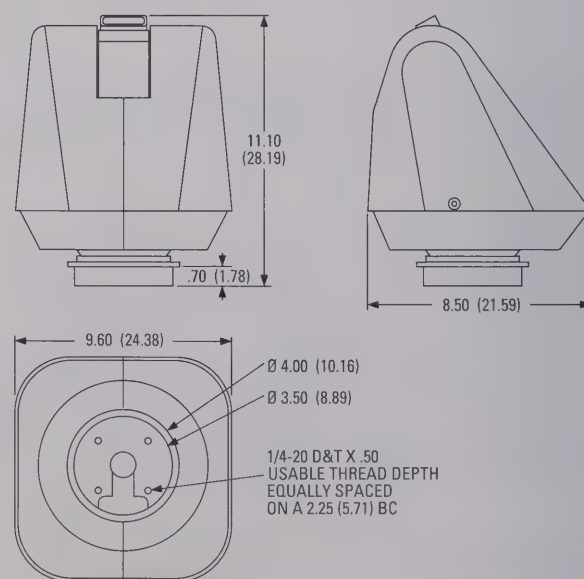
\*\*\*Using 2-wire motor common

## GENERAL

Construction	Aluminum exterior; painted steel and aluminum interior parts
Pan/Tilt	
Worm Gear	Delrin, premium performance acetal
Worm	Ground and polished stainless steel
Environment	Indoor/outdoor
Ambient Temperature	-10°F to 140°F (-23°C to 60°C)
Weight	21.5 lb (9.7 kg) approximate
Shipping Weight	25 lb (11.3 kg) approximate

## CERTIFICATIONS/RATINGS (Pan/Tilt Only)

- CE, Class B
- Meets NEMA Type 3R and IP54 standards



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

LEGACY PT780 SERIES PAN/TILT DIMENSION DRAWING



## Enclosure

### MECHANICAL

#### Camera Mounting

Removable camera sled; can be inverted to accommodate various cameras and lenses  
Link-lock No. 3, stainless steel. EH4700L Series (1); EH5723L Series (2). Latches can be secured with padlock of suitable size (not supplied)

#### Latches

### ELECTRICAL

#### Input Voltage

24, 120, or 230 VAC, 50/60Hz

#### Electrical Connection

Connectors for input power, camera, lens and accessories  
BNC for video  
BNC for camera synchronization  
26-pin RediLINK D-type connector (links enclosure to pan/tilt)

#### Power Consumption

	EH4700L	EH5723L
Heater (-1 models)	60 watts	90 watts
Heater (-2 models)	50 watts	50 watts
Heater (-3 models)	55 watts	70 watts
Defroster	15 watts	30 watts
Blower (-1 models)	8 watts	15 watts
Blower (-2 models)	8 watts	10 watts
Blower (-2 models)	8 watts	15 watts

Heater/defroster activates on at 42-58°F (6-14°C) and off at 72-88°F (22-31°C). Blower activates on at 77-93°F (25-34°C) and off at 62-78°F (17-26°C)

### GENERAL

#### Maximum Camera and Lens Size

Accepts camera and lens combinations\* (including BNC connector) up to:  
EH4718L-1/-2/-3 13.00" L x 4.75" W x 4.25" H (33.02 cm x 12.07 cm x 10.80 cm)  
EH4722L-1/-2/-3 17.00" L x 4.75" W x 4.25" H (43.18 cm x 12.07 cm x 10.80 cm)  
EH5723L-1/-2/-3 15.5" L x 6.25" W x 5.5" H (39.37 cm x 15.88 cm x 13.97 cm)  
Glass, 0.25-inch (6.35 mm) thick

#### Viewing Window

#### Viewing Window Area

EH4700L Series 3.50" H x 4.00" W (8.89 cm x 10.16 cm)  
EH5723L 4.25" H x 5.25" W (10.79 cm x 13.34 cm)

#### Construction

Die-cast, extruded, and sheet aluminum

#### Finish

Gray polyester powder coat

#### Environment

Indoor/outdoor (-10° to 120°F)

#### Unit Weight

EH4718L-1/-2/-3	8.5 lb (3.8 kg)
EH4722L-1/-2/-3	9.75 lb (4.4 kg)
EH5723L-1,-2,-3	14 lb (6.4 kg)

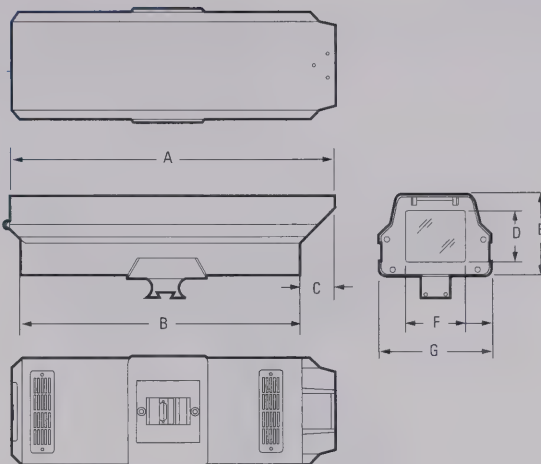
#### Shipping Weight

EH4718L-1/-2/-3	12 lb (5.4 kg)
EH4722L-1/-2/-3	13 lb (5.9 kg)
EH5723L-1,-2,-3	16 lb (7.3 kg)

\*Assumes lens is fully extended.

### CERTIFICATIONS/RATINGS (Enclosure Only)

- CE, Class B (EH4718L-2, EH4718L-3, EH4722L-2, EH4722L-3, EH5723L-2 and EH5723L-3)
- Meets NEMA Type 3R standards (4 when vent cover plates are used)
- Meets IP66 standards (with vent cover plates installed)



	EH4718L	EH4722L	EH5723L
A	21.20 (53.84)	25.20 (64.00)	26.50 (67.31)
B	18.30 (46.48)	22.30 (56.64)	23.00 (58.42)
C	2.25 (5.72)	2.25 (5.72)	3.06 (9.15)
D	3.50 (8.89)	3.50 (8.89)	4.25 (10.79)
E	6.70 (17.02)	6.70 (17.02)	8.09 (20.54)
F	4.00 (10.16)	4.00 (10.16)	5.25 (13.34)
G	7.25 (18.42)	7.25 (18.42)	8.98 (22.80)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

### LEGACY® SERIES ENCLOSURE DIMENSION DRAWING

SCANNERS, PAN/TILTS,  
LEGACY SYSTEM

## MODELS

### ENCLOSURES

EH4718L-1	Legacy environmental enclosure, 18-inch (45.72 cm) lower body length, 120 VAC heater and blower
EH4718L-2	Same as EH4718L-1 except supplied with 24 VAC heater and blower
EH4718L-3	Same as EH4718L-1 except supplied with 230 VAC heater and blower
EH4722L-1	Legacy environmental enclosure, 22-inch (55.88 cm) lower body length, 120 VAC heater and blower
EH4722L-2	Same as EH4722L-1 except supplied with 24 VAC heater and blower
EH4722L-3	Same as EH4722L-1 except supplied with 230 VAC heater and blower
EH5723L-1	Legacy environmental enclosure, 23-inch (58.42 cm) lower body length, 120 VAC heater and blower
EH5723L-2	Same as EH5723L-1 except 24 VAC heater and blower
EH5723L-3	Same as EH5723L-1 except 230 VAC heater and blower

### PAN/TILTS

PT780P	Medium duty, indoor/outdoor pan/tilt with RediLINK connector, 120 VAC
PT780P/PP	Same as PT780P except with presets
PT780SL	Same as PT780P except unit is capable of 360° pan rotation
PT780SL/PP	Same as PT780SL except with presets
PT780-VS	Medium duty, indoor/outdoor vari-speed pan/tilt, 12 VDC
PT780-VS/PP	Same as PT780-VS except with presets
PT780-VSSL	Same as PT780-VS except 360° pan rotation
PT780-VSSL/PP	Same as PT780-VSSL except with presets
PT780-24P	Medium duty, indoor/outdoor pan/tilt with RediLINK connector, 24 VAC
PT780-24P/PP	Same as PT780-24P except with presets
PT780-24SL	Same as PT780-24P except unit is capable of 360° pan rotation
PT780-24SL/PP	Same as PT780-24SL except with presets

**Note:** Legacy systems (enclosure, pan/tilt, receiver, mount, camera and lens) are available. Consult the factory for available configurations.

## OPTIONAL ACCESSORIES

### ENCLOSURE

O/I-LPP	Preset position lens wiring harness
O/I-OUTLET	120 VAC electrical outlet
SS4718	Sun shroud for EH4718L Series
SS4722	Sun shroud for EH4722L Series
SS5723	Sun shroud for EH5723L Series
TI47	Thermal insulation for EH4700L Series
TI57	Thermal insulation for EH5723L Series
WD47-1	Window defroster for EH4700L Series, 120 VAC, 15W
WD47-2	Window defroster for EH4700L Series, 24 VAC, 15W
WD47-3	Window defroster for EH4700L Series, 230 VAC, 15W
WD57-1	Window defroster for EH5723L Series, 120 VAC, 30W
WD57-2	Window defroster for EH5723L Series, 24 VAC, 30W
WD57-3	Window defroster for EH5723L Series, 230 VAC, 30W

### PAN/TILT

HB1*	Heater blanket, 120 VAC, 40W (0.33 amp). Allows operation to -50°F (-45°C). Thermostatically controlled; activates on at 40°F (4°C) and off at 60°F (15°C).
HB2*	Same as HB1 except 24 VAC, 40W (1.7 amps)
HB3*	Same as HB1 except 230 VAC, 40W (0.17 amp)

\*Factory installed options only. Please consult factory.

## LEGACY RECEIVERS

LRD41A11 Series	Fixed speed, Coaxitron receiver for use with LWM41 wall mount. 120/24/230 VAC
LRD41C21 Series	Fixed speed, Coaxitron/RS-422 receiver with presets for use with LWM41 wall mount. 120/24/230 VAC
LRD41C22 Series	Variable speed, Coaxitron/RS-422 receiver with presets for use with LWM41 wall mount. 120/24/230 VAC
LRD41C-CONNKIT	Connector kit for LRD41C21/LRD41C22 Series receiver. Required to enable the Aux/Alarm capabilities of the receiver.
LRD41TLC	Receiver plug-in testing module

## RECOMMENDED MOUNTS

LWM41	Wall mount; use with/without optional integral Legacy receiver
PM2000, PM2010	Ceiling/pedestal mount
CM400	Corner adapter for LWM41 wall mount
PA2000	Pan/tilt adapter for PM2000/PM2010 mounts
PA402	Pole adapter for LWM41 wall mount
PP300L, PP301L	Parapet adapter (corner) for LWM41 wall mount
PP400	Parapet adapter (wall) for LWM41 wall mount
PP4348	Parapet adapter (rooftop) for LWM41 wall mount

## MISCELLANEOUS ACCESSORIES

LL27 Series	Infrared illuminator
LL27LM	Mounting bracket for LL27 Series illuminator

Indicates change or addition.



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## Legacy® Series Integrated Positioning System

### PRESSURIZED OUTDOOR ENCLOSURE, COAXITRON® COMPATIBLE

#### Product Features

- Indoor/Outdoor Operation, Offering Extra Protection from Adverse Environmental Conditions
- RediLINK® Quick-Connect Feature
- Delrin® Worm-Gear Drives
- Optional Preset Positioning and 360° Pan Rotation
- Gold-Plated Pin Connectors Ensure Reliable Contact
- Prewired, Internal Feedthrough
- Easily Removed Clamshell Covers
- Bottom-opening Wall Mount Houses Integral Receiver
- Receiver Offers Adjustable Lens Voltages, Selectable Camera Voltages for NTSC or PAL Video, Transient Suppression Circuit Protection, and Auto/Random Scan as Standard Features



LEGACY PT780 PAN/TILT  
AND EH8106L ENCLOSURE

The **Legacy® Series** for adverse environments is designed to protect CCTV equipment exposed to severe indoor/outdoor conditions. The innovative system consists of "building block" components designed to simplify installation. Components include a pressurized enclosure, pan/tilt, receiver, and wall mount. The system also features Pelco's RediLINK® mechanical and electrical quick-connectors making assembly fast and effortless.

The **Legacy** pressurized enclosure is designed to meet stringent environmental standards. The enclosure is factory sealed and pressurized with dry nitrogen to 5 psi. Should the camera or lens require servicing, the enclosure may be easily recharged in the field. A relief valve prevents overcharging of the enclosure. Constructed of aluminum, the enclosure features an adjustable mounting cradle, thermostatically controlled heaters, and lens preset capabilities. An optional sun shroud is available for additional protection from the elements.

The **Legacy Series** pan and tilt is capable of handling loads up to 52 pounds (23.6 kilograms) and features gold-plated electrical pin

connectors to ensure reliable contact and smooth operation. The pan and tilt also features a Delrin® worm gear that requires no lubrication, is corrosion-resistant, and ensures long life. Limit stops are internally adjustable. Available in fixed or variable speed models, options for the pan and tilt include preset positioning, heater blanket, and 360-degree pan positioning. The pan and tilt is prewired for internal feedthrough for all enclosure and camera functions.

The receivers in the **Legacy Series** have a simple 3-wire power connection with an on/off switch that supplies power to the entire system. Choose from fixed or variable speed models, with or without presets, for 120/24/230 VAC applications. All models are compatible with Coaxitron® control systems and Pelco RS-422 control systems utilizing D or P type protocols.

The **Legacy** wall mount is constructed from aluminum and meets NEMA Type 4 standards. The mount opens from the bottom for easy access and installation of the **Legacy Series** Receiver. The mount can also be used for pole, corner and parapet applications when used with the appropriate adapter.



DataFAX  
SPEC: 21420  
MANUAL: 214206 (EH8106L), 23426 (PT780 Series)

C1420 / REVISED 10-02

IP67 CE

U.S. Patent #307,915, #340,940, #5,224,675

International Organization  
for Standardization  
Registered ISO 9001





## Pan/Tilt MECHANICAL

Pan Rotation	Movement in horizontal plane: 0–355° 0–360° (SL models only)
Pan Speed	
VS models only:	1–17°/sec ±1° (maximum load condition)
All others:	9°/sec ±1°
Tilt Rotation	90° down from horizontal; 60° up from horizontal
Tilt Speed	
VS models only:	1–4°/sec ±0.5° (maximum load condition)
All others:	3°/sec ±0.5°
Torque Output	
VS models only:	18.3 ft.lbs (24.8 N•m) at rated voltage and 75°F (23°C)
All others:	23.8 ft.lbs (32.3 N•m) at rated voltage and 75°F (23°C)
Maximum Load	
VS models only:	40 lbs (18.14 kg) at specified torque
All others:	52 lbs (23.55 kg) at specified torque
Pan/Tilt Drive System	Delrin® worm gear; ground and polished stainless steel worm
Pan/Tilt Bearings	Roller thrust bearings and bronze Oilite bushings
Lubricants	
Bearings	NLGI #2; Lithium complex grease fortified with molybdenum
Chain	Teflon chain lubricant, such as Tri-Flow
Braking	Friction

## ELECTRICAL

Input Voltage	120 VAC or 24 VAC, 50/60 Hz
VA Required	12 VDC (VS models only) (At specified input voltage)
	120 VAC      24 VAC      12 VDC
Pan	19.2 VA (.16A)      21.6 VA (.9A)      17.04 VA (1.42A)
Tilt	32.4 VA (.27A)      24 VA (1A)      12.48 VA (1.04A)
Total	51.6 VA (.43A)      45.6 VA (1.9A)      29.52 VA (2.46A)
Maximum Current	2 amps per conductor (SL models only)
Connectors	Amp CPC type, mate supplied (37 pins)
Motor Type	
VS models only:	12 VDC continuous duty. DC permanent magnet
All others:	Single phase, instantaneous reversing, induction type. 120 VAC or 24 VAC, 50/60 Hz, impedance protected. 50% duty cycle; 30 minute rating
Limit Switches	5 amp, 250 VAC maximum; internal adjustment
Pan/Tilt Conductor Requirements	
Standard model	20 unshielded, plus video & camera sync coax*
Standard with/PP	27 unshielded, plus video & camera sync coax*
Standard with/SL	14 unshielded, plus video & camera sync coax*
Standard with SL/PP	20 unshielded, plus video & camera sync coax*

\*Including safety ground

**Note:** Two additional conductors may be required with /HB option

### Note:

Presets are a function of the receiver. At this time, each pan/tilt with preset option is capable of 32 presets (first 8 are alarming) when used with a Coaxitron matrix control and compatible preset receiver.

### Cable Distances\*\*

PT780P Series	6 Conductors	7 Conductors***
20 AWG (0.5 mm <sup>2</sup> )	1,370 ft (417 m)	2,745 ft (836 m)
18 AWG (1.0 mm <sup>2</sup> )	2,180 ft (664 m)	4,370 ft (1,331 m)
16 AWG (1.5 mm <sup>2</sup> )	3,470 ft (1,057 m)	6,940 ft (2,115 m)
PT780-24P Series		
20 AWG (0.5 mm <sup>2</sup> )	59 ft (17.98 m)	118 ft (35.96 m)
18 AWG (1.0 mm <sup>2</sup> )	94 ft (28.65 m)	188 ft (57.30 m)
16 AWG (1.5 mm <sup>2</sup> )	149 ft (45.41 m)	298 ft (90.83 m)
PT780-VS Series	5 Conductors	
20 AWG (0.5 mm <sup>2</sup> )	24 ft (7.3 m)	
18 AWG (1.0 mm <sup>2</sup> )	38 ft (11.58 m)	
16 AWG (1.5 mm <sup>2</sup> )	60 ft (18.28 m)	

\*\*Cable distances are based on:

- 26.4 volts AC output voltage from controller (24 VAC models) or 132 volts AC output voltage from controller (120 VAC models) or 12 VDC output voltage from controller (12 VDC models) and
- 10% cable loss with both motors (pan/tilt) running simultaneously

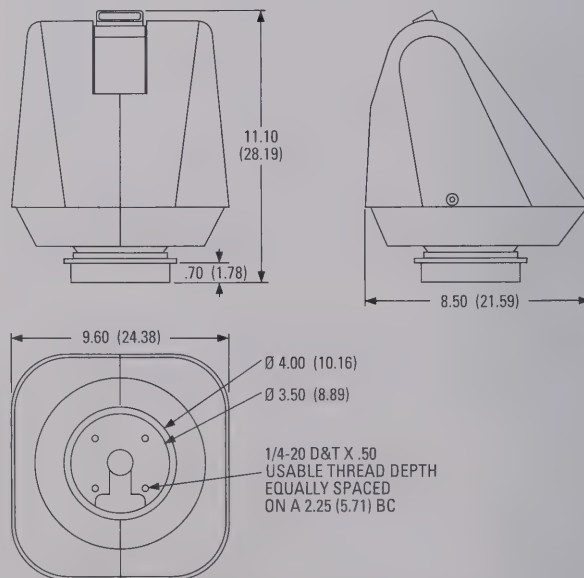
\*\*\*Using 2-wire motor common

## GENERAL

Construction	Aluminum exterior; painted steel and aluminum interior parts
Pan/Tilt	Delrin, premium performance acetal
Worm Gear	Ground and polished stainless steel
Worm	Indoor/outdoor
Environment	-10°F to 140°F (-23°C to 60°C)
Ambient Temperature	21.5 lb (9.7 kg) approximate
Weight	25 lb (11.3 kg) approximate
Shipping Weight	

## CERTIFICATIONS/RATINGS (Pan/Tilt Only)

- CE, Class B
- Meets NEMA Type 3R and IP54 standards (pan/tilt only)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

LEGACY PT780 SERIES PAN/TILT DIMENSION DRAWING

# TECHNICAL SPECIFICATIONS

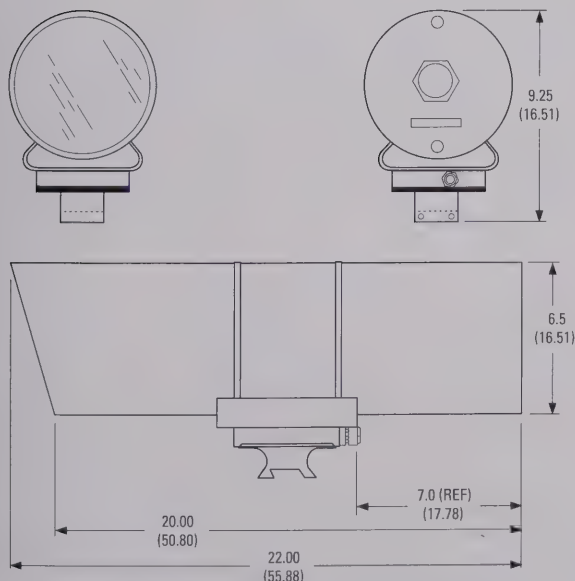
## Enclosure MECHANICAL

Front Window	Tempered glass; 0.225-inch (5.71 mm) thick
Camera Mounting	Multiple mounting holes on camera sled
Maximum Camera and Lens Size	Accepts camera and lens combinations* (including BNC connector) up to: 18" L x 4.00" W x 4.00" H (45.72 cm x 10.16 cm x 10.16 cm) or 18" L x 5.00" Dia. (45.72 cm x 12.7 cm)
Enclosure Mounting	RediLINK 26-pin connector mates enclosure to pan/tilt
Purge Fitting	Standard Schraeder valve to allow enclosure to be filled with dry nitrogen
Purge Relief Fitting	Prevents over pressurization of enclosure

\*Assumes lens is fully extended.

## ELECTRICAL

Input Voltage	120 VAC (230 VAC optional) for heaters. (Factory wired for 120 VAC; must specify 230 VAC at time of order)
Power Consumption (for Heaters)	80 watts Heaters are thermostatically controlled to activate on at 40°F (4°C) and off at 60°F (15°C)
Input Connector	Souriau 85107E2016P, 16-pin jam nut, panel mount receptacle (Souriau 85106EC2016S, MS-type mating connector supplied.)
Maximum Cable Distances (120 VAC)	16 AWG (0.5 mm <sup>2</sup> ) 2,238 ft (682 m) 18 AWG (1.0 mm <sup>2</sup> ) 1,410 ft (430 m) 20 AWG (1.5 mm <sup>2</sup> ) 886 ft (270 m)
(230 VAC)	16 AWG (0.5 mm <sup>2</sup> ) 8,224 ft (2,507 m) 18 AWG (1.0 mm <sup>2</sup> ) 5,182 ft (1,579 m) 20 AWG (1.5 mm <sup>2</sup> ) 3,257 ft (993 m)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

LEGACY EH8106L ENCLOSURE DIMENSION DRAWING

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Unit Weight	17.2 lb (7.8 kg)
Shipping Weight	23 lb (10.4 kg)

## ENVIRONMENTAL

Ambient Operating Temperature	-40° to 122°F (-40° to 50°C) with heater(s)
Vibration	5 to 60 Hz with 0.082-inch total travel (15 g's at 60 Hz). From 60 to 1,000 Hz, 5 g's rms with random vibration
Altitude	Sea level to equivalent of 10,000 ft (3,280 m)
Acoustic Noise	Operates in 150 dB acoustic noise environments
Humidity	Up to 100% relative humidity. Standard Schraeder and pressure relief valves provide positive internal pressure with dry nitrogen

## CERTIFICATIONS/RATINGS (Enclosure Only)

- CE, Class B
- Meets NEMA Type 6 and IP67 standards (enclosure only)

## MODELS

### ENCLOSURE

EH8106L

Legacy pressurized outdoor enclosure with lens preset capabilities and 120 or 230 VAC heaters (specify heater voltage at time of order). 6-inch (15.24 cm) inside diameter and 20-inch (50.8 cm) lower body length. For use with PT780 Series pan/tilts.

### PAN/TILTS

PT780P

Medium duty, indoor/outdoor pan/tilt with RediLINK connector, 120 VAC

PT780P/PP

Same as PT780P except with presets

PT780SL

Same as PT780P except unit is capable of 360° pan rotation

PT780SL/PP

Same as PT780SL except with presets

PT780-VS

Medium duty, indoor/outdoor variable speed pan/tilt, 12 VDC

PT780-VS/PP

Same as PT780-VS except with presets

PT780-VSSL

Same as PT780-VS except 360° pan rotation

PT780-VSSL/PP

Same as PT780-VSSL except with presets

PT780-24P

Medium duty, indoor/outdoor pan/tilt with RediLINK connector, 24 VAC

PT780-24P/PP

Same as PT780-24P except with presets

PT780-24SL

Same as PT780-24P except unit is capable of 360° pan rotation

PT780-24SL/PP

Same as PT780-24SL except with presets

**Note:** Legacy systems (enclosure, pan/tilt, receiver, mount, camera, and lens) are available. Consult the factory for available configurations.

## OPTIONAL ACCESSORIES

### ENCLOSURE

EH8006ORKIT

EH8106 O-ring kit; includes desiccant bags and lubricant

EH8000RKIT

Dry nitrogen recharging kit (non-refillable)

PSKIT8100

Pressure sensor kit. Provides a contact closure that can be wired to trigger an alarm when internal pressure drops to 2 psi.

SS8006

Sun shroud

### PAN/TILT

HB1\*

Heater blanket option, 120 VAC, 40 watts (0.33 amp). Allows operation to -50°F (-45°C). Thermostatically controlled to activate on at 40°F (4°C) and off at 60°F (15°C).

HB2\*

Same as HB1 except 24 VAC, 40 watts (1.7 amps)

HB3\*

Same as HB1 except 230 VAC, 40 watts (0.17 amp)

\*Factory installed options only. Please consult factory.

## LEGACY RECEIVERS

LRD41A11-1/-2/-3

Integral receiver for use with LWM41 wall mount. Fixed speed, Coaxitron compatible. 120/24/230 VAC

LRD41C21-1/-2/-3

Integral receiver for use with LWM41 wall mount. Fixed speed, Coaxitron/RS-422 compatible with 64 presets. 120/24/230 VAC

LRD41C22-1/-2/-3

Integral receiver for use with LWM41 wall mount. Variable speed, Coaxitron/RS-422 compatible with 64 presets. 120/24/230 VAC

LRD41C-CONNKIT

Two 9-pin connectors that interface with the 18-position double-stack Aux/Alarm connector on the LRD41C\*\* Series receiver. Required to enable the Aux/Alarm capabilities of the receiver.

LRD41TLC

Receiver plug-in module for testing control functions.

## RECOMMENDED MOUNTS

LWM41

Wall mount; can be used with/without optional integral Legacy receiver

PM2000, PM2010

Ceiling/pedestal mount

CM400

Corner mount adapter for LWM41 wall mount

PA2000

Pan/tilt adapter for ceiling/pedestal mount; must use with PM2000/PM2010 mounts

PA402

Pole mount adapter for LWM41 wall mount

PP300L, PP301L

Parapet mount (corner) for LWM41 wall mount

PP400

Parapet mount (wall) for LWM41 wall mount

PP4348

Parapet mount (rooftop) for LWM41 wall mount



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## PT270P Series Pan/Tilt

### INDOOR, LIGHT DUTY

#### Product Features

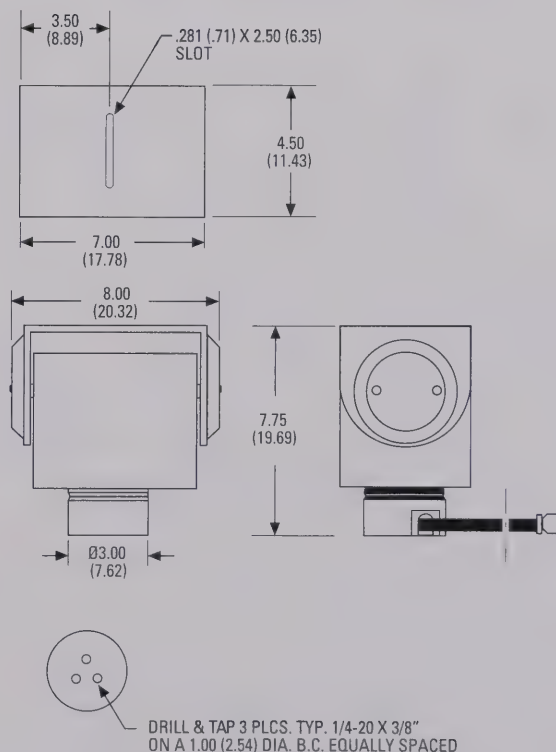
- "Mini" Pan/Tilt
- Easily Serviced
- Inverted Operation
- Indoor Applications
- External Limit Adjustments
- High Speed Pan Movement ( $12^\circ/\text{sec} \pm 1^\circ$ )
- 24 VAC, 120 VAC, or 230 VAC Operation
- Capable of Auto/Random Scan Operation when Used with Appropriate Control
- Maximum Load 15 Pounds (6.8 kg)



The **PT270 Series** of "mini" pan/tilts have been carefully engineered to accommodate the lighter, smaller, new generation of CCTV cameras. Small in size, but rugged in operation, the **PT270** measures only 7.75 inches (19.69 cm) high, 8 inches (20.32 cm) wide, and 4.50 inches (11.43 cm) deep. Ideally suited for indoor operation, this pan/tilt can be used in discreet enclosure applications or where space is a consideration.

The **PT270** features aluminum and steel construction and has long-life 24 VAC, 120 VAC, or 230 VAC motors capable of auto/random scan operation when used with the appropriate Pelco control.

The **PT270 Series** is capable of handling a maximum load of 15 pounds (6.8 kg), making it suitable for use with our EH3010 and other small enclosures.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2323  
MANUAL: 23236

C323 / REVISED 10-03



International Organization  
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Registered ISO 9001  
**ISO 9001**  
CERTIFIED

## MODELS

PT270P	Light duty mini pan/tilt, 120 VAC
PT270-24P	Light duty mini pan/tilt, 24 VAC
PT270P/230	Light duty mini pan/tilt, 230 VAC

## ELECTRICAL

Input Voltage	120 VAC, 60 Hz	
PT270P	24 VAC, 50/60 Hz	
PT270-24P	230 VAC, 50 Hz	
PT270P/230		
Power Requirements (Running)	Pan	Tilt
PT270P	0.06A (7.2 VA)	0.07A (8.4 VA)
PT270-24P	0.31A (7.6 VA)	0.43A (10.3 VA)
PT270P/230	0.03A (8.9 VA)	0.03A (8.7 VA)
Connectors	AMP CPC type (mate supplied)	
Motors	Two-phase induction type, instantaneous reversing	
Limit Switches	5A each (pan/tilt); external adjustment	
Conductor Requirements	6 or 7, unshielded (functions: left, right, up, down, motor common, safety ground). No additional conductors for auto scan when used with solid-state control	

### Maximum Operating Distances

		Maximum Distance	
		A	B
Cable Size			
<b>PT270-24P</b>	20 AWG (0.5 mm <sup>2</sup> )	159 ft (48 m)	5,800 ft (1,767 m)
	18 AWG (1.0 mm <sup>2</sup> )	254 ft (77 m)	8,250 ft (2,515 m)
	16 AWG (1.5 mm <sup>2</sup> )	403 ft (123 m)	13,000 ft (3,962 m)
7* Conductors	20 AWG (0.5 mm <sup>2</sup> )	274 ft (84 m)	
	18 AWG (1.0 mm <sup>2</sup> )	437 ft (133 m)	
	16 AWG (1.5 mm <sup>2</sup> )	694 ft (212 m)	
<b>PT270P</b>	20 AWG (0.5 mm <sup>2</sup> )	4,547 ft (1,386 m)	
	18 AWG (1.0 mm <sup>2</sup> )	7,234 ft (2,205 m)	
	16 AWG (1.5 mm <sup>2</sup> )	11,481 ft (3,499 m)	
<b>PT270P/230</b>	20 AWG (0.5 mm <sup>2</sup> )	14,714 ft (4,484 m)	
	18 AWG (1.0 mm <sup>2</sup> )	23,409 ft (7,135 m)	
	16 AWG (1.5 mm <sup>2</sup> )	37,151 ft (11,323 m)	

\*Using 2 wire motor common

- Notes:
- Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
  - Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
  - Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## MECHANICAL

Pan	0-355° movement in horizontal plane
Speed	12°/sec ±1°
Tilt	±90° movement in vertical plane
Speed	3°/sec ±0.5°
Maximum Load	15 lb (6.8 kg) at 2" (5.08 cm) from tilt table surface to center of gravity
Gearing	Chain and sprocket final drive
Bearings	Pan — Heavy duty ball bearings Tilt — Oilite bronze bushing
Braking	Friction type
Duty Cycle	50% duty cycle; 30 minute rating

## GENERAL

Construction	Aluminum and steel; all internal parts corrosion protected
Finish	Gray polyester powder coat
Environment	Indoor; 32° to 120°F (0° to 49°C)
Unit Weight	9 lb (4 kg)
Shipping Weight	10 lb (4.5 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (PT270-24P, PT270P/230)
- UL Listed (PT270P, PT270-24P)
- Meets NEMA Type 1 standards

## RECOMMENDED CONTROLS

Coaxitron or Matrix	See individual specification sheets for information.
MPT24DT	Desktop control for 24 VAC pan/tilt.
MPTAZ Series	Desktop pan/tilt and zoom lens control with auto/random scan for 120/24/230 VAC pan/tilts.
RB115, RB24, RB220	Relay box for extended low voltage operation. Extends operating distance (control to relay box). For use with 120/24/230 VAC pan/tilts and 24 VAC output controls.

## RECOMMENDED ENCLOSURE

EH3010/EH3014	Small, indoor enclosure
EH4010/EH4014	Small, indoor enclosure
EH3508/EH3512	Small, indoor/outdoor enclosure

## RECOMMENDED MOUNTS

PM14	Light duty wall mount; maximum load 20 lb (9.07 kg)
PM105	Medium duty wall mount; maximum load 40 lb (18.14 kg)

Indicates change or addition.



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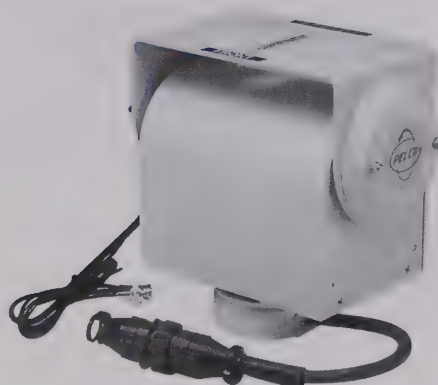
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## PT280-24P Pan/Tilt

### INDOOR, LIGHT DUTY, FEEDTHROUGH

#### Product Features

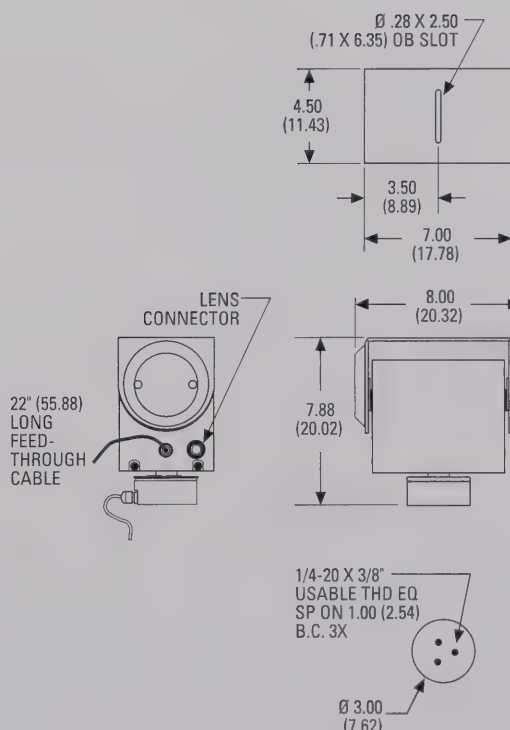
- "Mini" Pan/Tilt
- 24 VAC Operation
- Indoor Applications
- Inverted Operation
- Prewired for Zoom Lens, Camera Power and Video
- High Speed Pan Movement ( $12^\circ/\text{sec} \pm 1^\circ$ )
- Capable of Auto/Random Scan Operation when Used with Appropriate Control
- Maximum Load 15 Pounds (6.8 kg)



The **PT280-24P** is a "mini" light duty, indoor pan/tilt that is factory prewired for feedthrough of all control functions (pan/tilt, motorized zoom lens, 24 VAC camera power, and video). All connections are made at the input connector, eliminating the need for wiring harnesses made in the field. This feature greatly reduces installation time, while increasing the reliability and serviceability of the system.

The **PT280-24P** will accept a maximum load of 15 pounds (6.8 kg) and is ideally suited for use with our EH3010/EH3014 and other small enclosures.

The unit is also capable of auto/random scan operation when used with our MPTAZ24DT control.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 2324  
MANUAL: 23246

C324 / REVISED 10-03



International Organization  
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# TECHNICAL SPECIFICATIONS


## MODEL

PT280-24P Light duty mini pan/tilt, 24 VAC

## ELECTRICAL

Input Voltage	24 VAC		
Power Requirements			
(Running)	Pan	0.31A (7.5 VA)	
	Tilt	0.38A (9.2 VA)	
(Starting)	Pan	0.47A (11.2 VA)	
	Tilt	0.56A (13.5 VA)	
Connector	AMP CPC type (mate supplied), installed onto a pigtail exiting from the base of the unit (all functions, camera power, lens, video, pan/tilt)		
Video Connector	BNC		
Camera Power	Spade lugs		
Motors	Two-phase induction type, instantaneous reversing		
Limit Switches	5A each (pan/tilt); external adjustment		
Conductor Requirements	As listed, plus coax cable:		
	Pan/Tilt	5 plus ground	
	Lens	4	
	Camera AC	2	

### Maximum Operating Distances

		Maximum Distance			
	Cable Size	A		B	
<b>PT280-24P</b> 5 Conductors	20 AWG (0.5 mm <sup>2</sup> )	110 ft	(34 m)	5,800 ft	(1,767 m)
	18 AWG (1.0 mm <sup>2</sup> )	180 ft	(55 m)	8,250 ft	(2,515 m)
	16 AWG (1.5 mm <sup>2</sup> )	290 ft	(88 m)	13,000 ft	(3,962 m)
6* Conductors	20 AWG (0.5 mm <sup>2</sup> )	210 ft	(64 m)		
	18 AWG (1.0 mm <sup>2</sup> )	330 ft	(101 m)		
	16 AWG (1.5 mm <sup>2</sup> )	530 ft	(162 m)		

\*Using 2 wire motor common

- Notes:
1. Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
  2. Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
  3. Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## MECHANICAL

Pan	0-355° movement in horizontal plane
Speed	12°/sec ±1°
Tilt	±90° movement in vertical plane
Speed	3°/sec ±0.5°
Maximum Load	15 lb (6.8 kg) at 2" (5.08 cm) from tilt table surface to center of gravity (upright or inverted)
Gearing	Chain and sprocket final drive
Bearings	Pan — Heavy duty ball bearings Tilt — Oilite bronze bushing
Duty Cycle	50% duty cycle; 30 minute rating

## GENERAL

Construction	Aluminum plate, all internal parts corrosion protected
Finish	Gray polyester powder coat
Environment	Indoor; 32° to 120°F (0° to 49°C)
Unit Weight	9 lb (4 kg)
Shipping Weight	11 lb (4.9 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed
- Meets NEMA Type 1 standards

## RECOMMENDED CONTROLS

Coaxitron or Matrix	See individual spec sheets for information
MPT24DT	Desktop control for 24 VAC pan/tilt
MPTAZ24DT	Desktop pan/tilt and zoom lens control with auto/random scan for 24 VAC pan/tilts
RB24	Relay box for 24 VAC pan/tilts; extends operating distance (control to relay box)

## RECOMMENDED ENCLOSURES

EH3010/EH3014	Small, indoor enclosure
EH4010/EH4014	Small, indoor enclosure
EH3508/EH3512	Small, indoor/outdoor enclosure

## RECOMMENDED MOUNTS

PM105	Medium duty wall mount; maximum load 40 lb (18.14 kg)
PM14	Light duty wall mount; maximum load 20 lb (9.07 kg)

Indicates change or addition.



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# PS20 Series Scanner

## INDOOR/OUTDOOR, MEDIUM DUTY

### Product Features

- High Reliability – No Worm Gears to Adjust, No Chain to Lubricate, No Gear Head on Motor
- Scans Past 360°, Eliminates Blind Spots
- 2-Year Unlimited Continuous Duty Warranty
- Auto and Random Scan Operation
- Three Speed Settings
- 120 VAC, 24 VAC, and 230 VAC Models
- Upright or Inverted Operation
- Magnetic Limit Stops Microprocessor Controlled
- Quiet, Smooth Operation
- Completely Sealed Unit – Meets NEMA Type 4 Standards
- Maximum Load 35 Pounds (15.75 kg)

Backed by a two-year unlimited continuous duty warranty, Pelco's **PS20 Series** scanner is perfect for indoor and outdoor installations. Ruggedly constructed and completely sealed, the scanner features stepper motor technology for increased reliability; three speed settings (3, 6, and 12 degrees per second) selectable at installation; and micro-processor-controlled magnetic limit stops for quiet smooth operation.

The **PS20** is ideal for a wide array of surveillance installations and reduces the need for numerous fixed cameras. Designed to operate with loads up to 35 pounds (15.75 kg), the medium duty scanner is easy to install and can be mounted to any flat surface in an upright or inverted position.

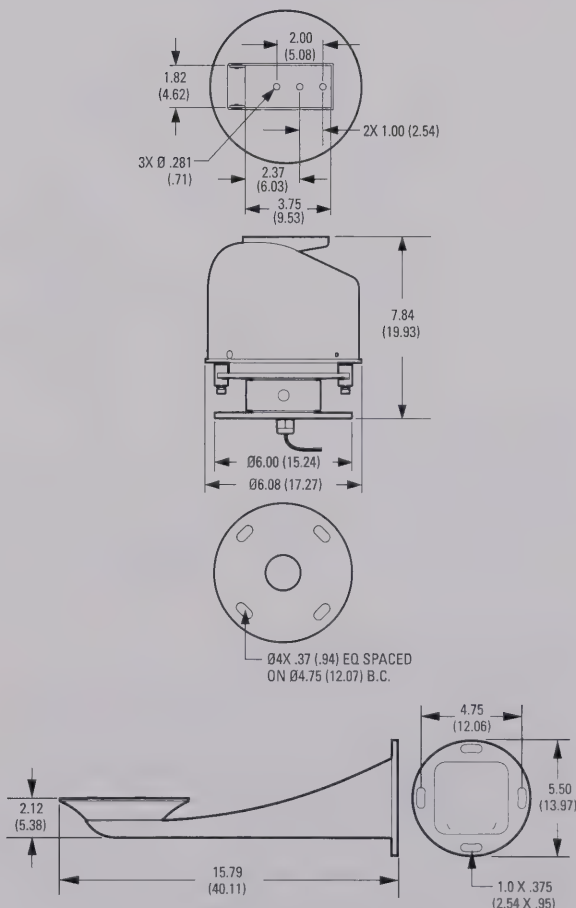
The scanner is capable of pan rotation past 360 degrees, to 380 degrees, for a complete panoramic view. The unit also has a manually adjustable tilt table for viewing from 0 degrees horizontal to 65 degrees tilt position.

The **PS20** scanner is capable of auto and random scan operation without the need for a controller. Connected to a Pelco MPTAZ Series control, the scanner can operate continuously, randomly, and manually. The **PS20 Series** scanner is compatible with all Pelco scanner and pan/tilt hard wire controllers.

The 24 VAC **PS20** scanner is available in easy-to-order ScannerPak systems. Systems include an EH3512-HD enclosure, sun shroud, and choice of pre-installed camera configuration (camera and lens). The PSWM wall mount designed specifically for the **PS20 Series** is also available with some ScannerPak systems. See the ScannerPak Selection Guide for system model numbers.



PS20 WITH EH3512-2HD, SUN SHROUD, AND PSWM



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2361  
MANUAL: 23616

C361 / REVISED 10-03

IP66



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SCANNER  
OUTDOOR

## MODELS

PS20	Medium duty scanner, 120 VAC
PS20-24	Medium duty scanner, 24 VAC
PS20/230	Medium duty scanner, 230 VAC

## MECHANICAL

Pan	0-380° movement in horizontal plane
Speed	3°, 6°, and 12° per sec
Maximum Load	35 lb (15.7 kg) centered
Operation	Upright or inverted
Bearings	Heavy duty ball bearings
Overload Protection	Thermal protected

## ELECTRICAL

Input Voltage	
PS20	95-130 VAC
PS20-24	22-28 VAC
PS20/230	210-240 VAC
Power Requirements	
PS20	0.25A (30 VA) at 120 VAC
PS20-24	0.75A (20 VA) at 24 VAC
PS20/230	0.25A (30 VA) at 230 VAC
Connectors	Wire nuts (provided), butt splice (not provided)
Motors	Stepper motor, continuous duty, instantaneous reversing
Limit Switches	Auto scan switching; external adjustment
Conductors	7, unshielded (functions: left, right, auto, motor common, safety ground, AC HI, AC LO)
Maximum Operating Distances	

	20 AWG (0.5 mm <sup>2</sup> )	18 AWG (1.0 mm <sup>2</sup> )	16 AWG (1.5 mm <sup>2</sup> )
PS20	2,300 ft (701 m)	3,700 ft (1,127 m)	5,900 ft (1,798 m)
PS20-24	5,600 ft (1,706 m)	9,000 ft (2,743 m)	14,300 ft (4,368 m)
PS20/230	1,400 ft (426 m)	2,300 ft (701 m)	3,600 ft (1,097 m)

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Indoor/outdoor; -10° to 120°F (-23° to 49°C)
Unit Weight	9.9 lb (4.5 kg)
Shipping Weight	12 lb (5.4 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- Meets NEMA Type 4, IP66 standards
- U.S. patent pending

## RECOMMENDED CONTROLS

MPS524DT	Desktop control for PS20-24 scanner
MPTAZ Series	Desktop scanner and zoom lens control capable of auto/random scan

## RECOMMENDED ENCLOSURE

EH3010/EH3014	Small, indoor enclosure
EH4010/EH4014	Small, indoor enclosure
EH3508/EH3512	Small, indoor/outdoor enclosure

## RECOMMENDED MOUNTS

PSWM	Wall mount for PS20 Series
PM2000, PM2010	Universal ceiling/pedestal mount
ECM100	Corner mount; use with PSWM wall mount
EPM	Pole mount; use with PSWM wall mount

## SCANNERPAK SYSTEMS

ScannerPak Systems include the 24 VAC scanner (PS20-24), an EH3512-2HD enclosure, sun shroud, choice of Pelco camera and 3-8 mm varifocal lens. (Consult the factory for 120 or 230 VAC ScannerPak Systems.)

Available ScannerPak Model Numbers:	PS20-2CHV3 PS20-2CHV3W	PS20-2CGV3 PS20-2CGV3W	PS20-2MGV3 PS20-2MGV3W
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## SELECTION GUIDE

### System Model Number

Scanner and Enclosure	PS20-2CHV3W
(The EH3512-2HD enclosure includes a heater and defroster)	
Camera	
CG	= CC3710S-6, standard resolution, color camera, NTSC
CH	= CC3710H-6, high resolution, color camera, NTSC
MG	= MC3710S-6, standard resolution, monochrome camera, NTSC
Lens	
V3	= 13VA Series, 3-8 mm varifocal lens
Mount	
Blank	= No mount
W	= PSWM wall mount



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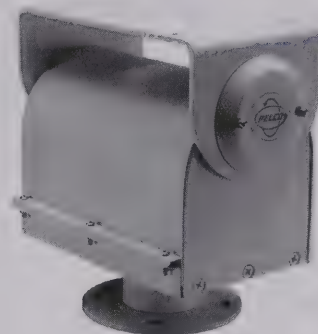
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## PT570P/PT570-24P Pan/Tilt OUTDOOR, MEDIUM DUTY

### Product Features

- Easily Serviced
- Inverted Operation
- External Limit Stops
- Outdoor Applications
- Adjustable Worm-Gear Final Drive
- 120 VAC or 24 VAC Operation
- Capable of Auto/Random Scan Operation when Used with Appropriate Control
- Maximum Load 40 Pounds (18.14 kg)

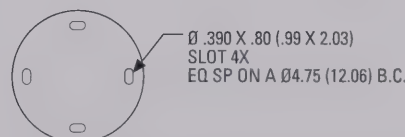
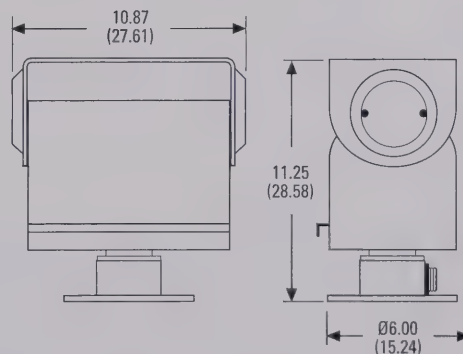
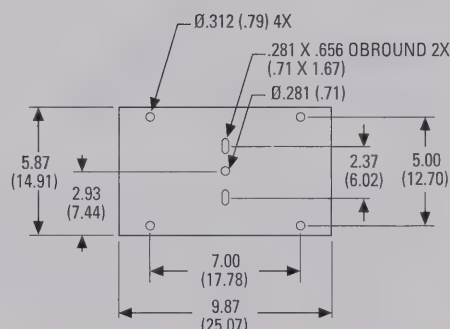


The **PT570P** and the **PT570-24P** are medium duty pan/tilts designed for outdoor applications. Both units feature rugged worm-gear final drives to minimize backlash and prevent wind drift. The drives are fully adjustable for wear.

Control voltages are 120 VAC for the **PT570P** and 24 VAC for the **PT570-24P**. Construction is of aluminum, and the units are completely sealed for all-weather use. The **PT570P** and **PT570-24P** will accept a maximum load of 40 pounds (18.14 kg) and are recommended for use with our EH4700 Series environmental enclosures.

Optional blanket heater available to allow operation to -50°F (-45°C).

Over twenty years of quality design and manufacturing have resulted in pan/tilts which provide long, reliable operation.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 2330  
MANUAL: 23306

C330 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

PT570P	Medium duty pan/tilt, 120 VAC
PT570P/PP	Medium duty pan/tilt with presets, 120 VAC
PT570-24P	Medium duty pan/tilt, 24 VAC
PT570-24P/PP	Medium duty pan/tilt with presets, 24 VAC

## ELECTRICAL

		PT570P	PT570-24P
Input Voltage		120 VAC, 50/60 Hz	24 VAC, 50/60 Hz
Power Requirements			
(Running)	Pan	0.18A (21.6 VA)	0.9A (21.6 VA)
	Tilt	0.18A (21.6 VA)	0.9A (21.6 VA)
(Starting)	Pan	0.27A (32.4 VA)	1.35A (32.4 VA)
	Tilt	0.27A (32.4 VA)	1.35A (32.4 VA)
Connectors		AMP CPC type (mate supplied)	
Motors		Two-phase induction type, instantaneous reversing	
Limit Switches		5A each (pan and tilt); external adjustment	
Conductor Requirements		6 or 7, unshielded (functions: left, right, up, down, motor common, safety ground). (No additional conductors for auto scan when used with solid-state control. PP option requires 4 additional conductors.)	

### Maximum Operating Distances

		Maximum Distance	
	Cable Size	A	B
<b>PT570P</b> 6 Conductors	20 AWG (0.5 mm <sup>2</sup> )	1,045 ft (319 m)	5,800 ft (1,767 m)
	18 AWG (1.0 mm <sup>2</sup> )	1,665 ft (507 m)	8,250 ft (2,515 m)
	16 AWG (1.5 mm <sup>2</sup> )	2,640 ft (805 m)	13,000 ft (3,962 m)
7* Conductors	20 AWG (0.5 mm <sup>2</sup> )	2,080 ft (634 m)	
	18 AWG (1.0 mm <sup>2</sup> )	3,330 ft (1,015 m)	
	16 AWG (1.5 mm <sup>2</sup> )	5,285 ft (1,611 m)	
<b>PT570-24P</b> 6 Conductors	20 AWG (0.5 mm <sup>2</sup> )	40 ft (12 m)	
	18 AWG (1.0 mm <sup>2</sup> )	65 ft (20 m)	
	16 AWG (1.5 mm <sup>2</sup> )	110 ft (34 m)	
7* Conductors	20 AWG (0.5 mm <sup>2</sup> )	85 ft (26 m)	
	18 AWG (1.0 mm <sup>2</sup> )	135 ft (41 m)	
	16 AWG (1.5 mm <sup>2</sup> )	220 ft (67 m)	

\*Using 2 wire motor common

- Notes: 1. Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
2. Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
3. Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## MECHANICAL

Pan	0-355° movement in horizontal plane
Speed	6°/sec ±1°
Torque	10 lb-ft with specified voltage
Tilt	±90° movement in vertical plane
Speed	3°/sec ±0.5°
Torque	20 lb-ft with specified voltage
Maximum Load	40 lb (18.1418.14 kg) at 5" (12.7 cm) from tilt table surface to center of gravity
Gearing	Adjustable worm-gear final drive to prevent drift and minimize backlash
Bearings	
Pan	Heavy-duty ball bearings
Tilt	Oilite bronze bushing
Braking	Mechanical friction-type
Duty Cycle	50% duty cycle; 30 minute rating

## GENERAL

Construction	Aluminum plate; all internal parts corrosion protected
Finish	Gray polyester powder coat
Environment	Outdoor; -10° to 120°F (-23° to 49°C)
Unit Weight	22 lb (9.9 kg)
Shipping Weight	25 lb (11.5 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (PT570-24P, PT570-24P/PP)
- UL Listed
- Meets NEMA Type 3R standards

## OPTIONS

HB/570	Blanket heater in cover, 75W. Allows operation to -50°F (-45°C). 120 VAC, 50/60 Hz.
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## RECOMMENDED CONTROLS

Coaxitron or Matrix	See individual specification sheets for information.
MPT24DT	Desktop control for 24 VAC pan/tilt.
MPTAZ Series	Desktop pan/tilt and zoom lens control with auto/random scan.
RB115, RB24	Relay box for extended low voltage operation. Extends operating distance (control to relay box).

## RECOMMENDED ENCLOSURE

EH4700 Series	Environmental enclosure
---------------	-------------------------

## RECOMMENDED MOUNTS

PA2000	Adapter plate; required when using WM2000
PM2000, PM2010	Ceiling/pedestal mount; maximum load 125 lb (56.7 kg)
ST1	Support strut; use with WM2000/PM2000/PM2010
WM2000	Wall mount; maximum load 75 lb (34 kg)

Indicates change or addition.



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## MODEL

PT680-24P

Medium duty outdoor pan/tilt, 24 VAC operation, supplied with factory-assembled pigtail cable and connector

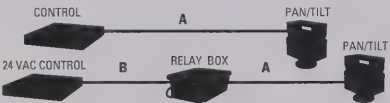
## MECHANICAL

Pan	0-355° movement in horizontal plane
Speed	9°/sec $\pm 1^\circ$
Torque	10 ft-lb with specified voltage
Tilt	$\pm 90^\circ$ movement in vertical plane
Speed	3°/sec $\pm 0.5^\circ$
Maximum Load	50 lb (22.7 kg) at 5" (12.7 cm) from tilt table surface to center of gravity
Gearing	Adjustable worm-gear final drive to prevent drift and minimize backlash
Bearings	
Pan	Heavy-duty ball bearings
Tilt	Oilite bronze bushing
Duty Cycle	50% duty cycle; 30 minute rating

## ELECTRICAL

Input Voltage	24 VAC, 50/60 Hz
Power Requirements	
Pan	0.9A (21.6 VA)
Tilt	1A (24.0 VA)
Connectors	AMP CPC type, mate supplied
Motors	Two-phase induction type, instantaneous reversing
Limit Switches	5A each (pan and tilt)
Conductor Requirements	13, plus ground and coax

### Maximum Operating Distances

					
		Maximum Distance			
		A		B	
Cable Size					
<b>PT680-24P</b> 5 Conductors	20 AWG (0.5 mm <sup>2</sup> )	60 ft	(18 m)	5,800 ft	(1,767 m)
	18 AWG (1.0 mm <sup>2</sup> )	95 ft	(29 m)	8,250 ft	(2,515 m)
	16 AWG (1.5 mm <sup>2</sup> )	155 ft	(47 m)	13,000 ft	(3,962 m)
6* Conductors	20 AWG (0.5 mm <sup>2</sup> )	118 ft	(35 m)		
	18 AWG (1.0 mm <sup>2</sup> )	185 ft	(56 m)		
	16 AWG (1.5 mm <sup>2</sup> )	295 ft	(90 m)		

\*Using 2 wire motor common

- Notes:**
- Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
  - Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
  - Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## GENERAL

Construction	Aluminum plate, all parts corrosion protected
Finish	Gray polyester powder coat
Environment	Outdoor operation; -10° to 120°F (-23° to 49°C)
Unit Weight	21.26 lb (9.6 kg)
Shipping Weight	26 lb (11.7 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 3R standards

## OPTIONS

C6806	Pretested 6-foot (1.8 m) cable for use with PT680-24P pan/tilt and CX9024RX receiver. Not for inverted applications
C6825	Same as C6806 except cable is 25 feet (7.6 m) long

## RECOMMENDED CONTROLS

Coaxitron or Matrix	See individual specification sheets for information.
MPT24DT	Desktop control for 24 VAC pan/tilt.
MPTAZ24DT	Desktop pan/tilt and zoom lens control with auto/random scan for 24 VAC pan/tilts.
RB24	Relay box for 24 VAC pan/tilts. Extends operating distance (control to relay box).

## RECOMMENDED ENCLOSURES

EH4700 Series	Environmental enclosure
EH5700 Series	Environmental enclosure

## RECOMMENDED MOUNTS

PA2000	Adapter plate. Required when using WM2000.
PM2000, PM2010	Ceiling/pedestal mount; maximum load 125 lb (56.7 kg).
ST1	Support strut for WM2000/PM2000/PM2010.
WM2000	Wall mount; maximum load 75 lb (34 kg). When used with ST1 support strut, maximum load is increased to 150 lb (68 kg). Must be used with PA2000 adapter.

Indicates change or addition.



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## PT1250DC Pan/Tilt

### OUTDOOR, HEAVY DUTY

#### Product Features

- 115 VDC Operation
- Optional Preset Positioning Capability
- Heavy Duty Adjustable Worm-Gear Final Drive
- Capable of Auto Scan and Variable Speed Operation when Used with Appropriate Control
- Outdoor Applications
- Rugged Aluminum Construction
- Maximum Load 100 Pounds (45.4 kg)

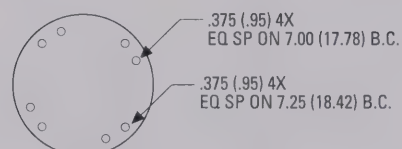
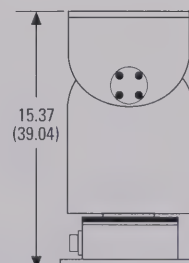
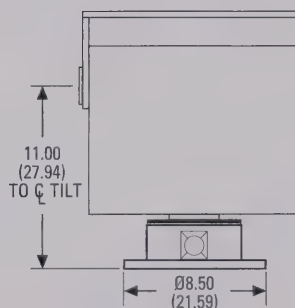
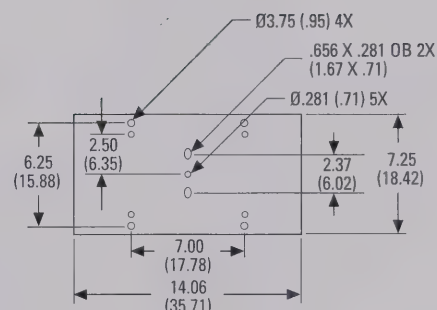


The **PT1250DC** is a heavy duty pan/tilt, ruggedly constructed to comfortably operate with loads up to 100 pounds (45.4 kg). High torque D.C. motors with heavy duty adjustable worm-gear final drive assemblies eliminate backlash and drifting. Equally important to the operator is dynamic braking for instantaneous stopping.

The **PT1250DC** is capable of auto scan and variable speed operation with the addition of the appropriate Pelco solid-state control modules. No additional conductors are required for either optional control module.

Extremely serviceable, the **PT1250DC** features easy access to all electrical and mechanical components.

The **PT1250DC** is manufactured from cast and plate aluminum with all internal parts corrosion-protected steel or aluminum. Limit stops are externally adjustable for ease of installation.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2373  
MANUAL: 23736

C373 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

PT1250DC  
PT1250DC/PP

Heavy duty pan/tilt, 115 VDC  
Same as PT1250DC except has position feedback modification. Requires preset control or control with AZL option (panel readout meters)

## MECHANICAL

Pan 0-355° movement in horizontal plane  
Speed 6°/sec  $\pm 1^\circ$   
Tilt  $\pm 90^\circ$  movement in vertical plane  
Speed 3°/sec  $\pm 0.5^\circ$   
Maximum Load 100 lb (45.4 kg) at 5" (12.7 cm) from tilt table surface to center of gravity  
Adjustable worm-gear final drive  
Gearing  
Bearings Pan Heavy duty ball bearings  
Tilt Oilite bronze bushing  
Braking Dynamic for instantaneous stopping

## ELECTRICAL

Input Voltage 115 VDC  
Power Requirements (Running) Pan 0.30A (34 VA)  
Tilt 0.30A (34 VA)  
(Starting) Pan 0.44A (51 VA)  
Tilt 0.44A (51 VA)  
Connectors Amp CPC type (mate supplied)  
Motors 115 VDC permanent magnet  
Limit Switches 5A each (pan and tilt); external adjustment  
Conductor Requirements 6, unshielded (functions: left, right, up, down, motor common, safety ground).  
(No additional conductors for auto scan or variable speed. PP option requires additional 4 conductors.)  
Cable Distances 6 Conductors  
20 AWG (0.5 mm<sup>2</sup>) 635 feet (193 m)  
18 AWG (1.0 mm<sup>2</sup>) 1,015 feet (309 m)  
16 AWG (1.5 mm<sup>2</sup>) 1,610 feet (490 m)  
Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## GENERAL

Construction Aluminum casting and plate  
Finish Gray polyester powder coat  
Environment Outdoor operation; -10° to 120°F (-23° to 49°C)  
Unit Weight 55 lb (25 kg)  
Shipping Weight 59 lb (26.7 kg)

## RECOMMENDED CONTROLS

MPTV1510DT Desktop control with variable speed operation for 115 VDC pan/tilts

## CONTROL OPTIONS

AZL Azimuth and elevation readout meter option for MPTV1510DT control. Required if using PT1250DC/PP with a Pelco MPTV1510DT control.

## RECOMMENDED ENCLOSURES

EH5700 Series Environmental enclosure, large

## RECOMMENDED MOUNTS

PA2010 Adapter plate; required when using WM2000.  
PM2000, PM2010 Ceiling/pedestal mount; maximum load 125 lb (56.7 kg).  
ST1 Support strut for WM2000/PM2000/PM2010.  
WM2000 Wall mount; maximum load 75 lb (34 kg).  
When used with ST1 support strut, maximum load is increased to 150 lb (68 kg). Must be used with PA2010 adapter and ST1 strut.  
WM3026 Wall mount with adjustable head; maximum load 300 lb (136 kg).



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## PT1250P Pan/Tilt

### OUTDOOR, HEAVY DUTY

#### Product Features

- 120 VAC or 230 VAC Operation
- Optional Preset Positioning Capability
- Heavy Duty, Adjustable Worm-Gear Final Drive
- External Pan and Tilt Limit Adjustment
- Capable of Auto/Random Scan Operation
- Rugged Aluminum Construction
- Indoor/Outdoor Applications
- Maximum Load 100 Pounds (45.4 kg)

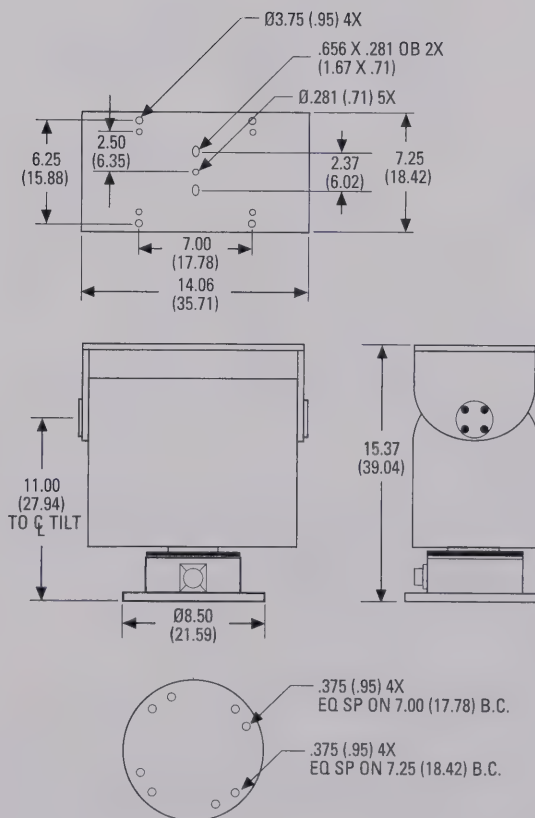


The **PT1250P** is a heavy duty pan/tilt easily capable of handling loads up to 100 pounds (45.4 kg). Equipped with high torque AC motors with adjustable worm-gear final drives, this pan/tilt ensures long operational life as well as drift-free operation.

The **PT1250P** is capable of auto/random scan operation when used with our solid-state auto/random scan joystick control. No additional conductors, micro switches, or relays are required for auto/random scan operation.

The **PT1250P** is manufactured from cast and plate aluminum with all internal parts corrosion-protected steel or aluminum. Limit stops are externally adjustable for ease of installation.

The **PT1250P** is recommended for use with our EH5700 Series environmental enclosures.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2370  
MANUAL: 23706

C370 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



PAN/TILT  
OUTDOOR

## MODELS

PT1250P	Heavy duty pan/tilt, 120 VAC
PT1250P/220	Heavy duty pan/tilt, 230 VAC
PT1250P/PP	Same as PT1250P except has preset positioning option. Requires preset control or control with AZL option

## ELECTRICAL

		PT1250P	PT1250P/220
Input Voltage		120 VAC, 50/60 Hz	230 VAC, 50 Hz
Power Requirements			
(Running)	Pan	0.48A (57.5 VA)	0.19A (43.7 VA)
	Tilt	0.48A (57.5 VA)	0.27A (62.1 VA)
(Starting)	Pan	0.60A (72.5 VA)	0.19A (43.7 VA)
	Tilt	0.60A (72.5 VA)	0.27A (62.1 VA)
Connectors		AMP CPC type (mate supplied)	
Motors		Two-phase induction type, instantaneous reversing	
Limit Switches		5A each (pan and tilt); external adjustment	
Conductor Requirements		6 or 7, unshielded (functions: left, right, up, down, motor common, safety ground). No additional conductors for auto scan when used with solid-state control. PP option requires additional 4 conductors	

### Maximum Operating Distances

	Cable Size	Maximum Distance		
		A	B	
<b>PT1250P</b>	20 AWG (0.5 mm <sup>2</sup> )	489 ft (149 m)	5,800 ft (1,767 m)	
	18 AWG (1.0 mm <sup>2</sup> )	778 ft (237 m)	8,250 ft (2,515 m)	
	16 AWG (1.5 mm <sup>2</sup> )	1,235 ft (376 m)	13,000 ft (3,962 m)	
7* Conductors	20 AWG (0.5 mm <sup>2</sup> )	978 ft (298 m)		
	18 AWG (1.0 mm <sup>2</sup> )	1,556 ft (474 m)		
	16 AWG (1.5 mm <sup>2</sup> )	2,470 ft (752 m)		
<b>PT1250P/220</b>	20 AWG (0.5 mm <sup>2</sup> )	2,463 ft (750 m)		
	18 AWG (1.0 mm <sup>2</sup> )	3,918 ft (1,194 m)		
	16 AWG (1.5 mm <sup>2</sup> )	6,218 ft (1,895 m)		

\*Using 2 wire motor common

- Notes:
- Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
  - Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
  - Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## MECHANICAL

Pan	0-355° movement in horizontal plane
Speed	6°/sec ±1°
Torque	50 ft-lb with specified voltage
Tilt	±90° movement in vertical plane
Speed	3°/sec ±0.5°
Maximum Load	100 lb (45.4 kg) at 5" (12.7 cm) from tilt table surface to center of gravity
Gearing	Adjustable worm-gear final drive
Bearings	
Pan	Heavy-duty ball bearings
Tilt	Oilite bronze bushing
Braking	Mechanical
Duty cycle	50% duty cycle; 30 minute rating

## GENERAL

Construction	Aluminum casting and plate; all internal parts corrosion protected
Finish	Gray polyester powder coat
Environment	Indoor/outdoor; -10° to 120°F (-23° to 49°C)
Unit Weight	54 lb (24.5 kg)
Shipping Weight	59 lb (26.7 kg)

## CERTIFICATIONS/RATINGS

- UL Listed (except PT1250P/220)
- Meets NEMA Type 3R standards

## RECOMMENDED CONTROLS

Coaxitron or Matrix	See individual specification sheets for information. Preset pan/tilt must be used with Coaxitron or Matrix control with PP capability and preset receiver.
MPTAZ Series	Desktop control (PTZ) with auto/random scan for 120/230/24 VAC pan/tilts.
RB115	Relay box for 120 VAC pan/tilts. Extends operating distance (control to relay box). Use only with MPT24DT or MPTAZ24DT low voltage controls.
RB220	Same as RB115 except for 230 VAC pan/tilts.

## RECOMMENDED ENCLOSURES

EH5700 Series	Environmental enclosure, large.
---------------	---------------------------------

## RECOMMENDED MOUNTS

PA2010	Adapter plate; required when using WM2000
PM2000, PM2010	Ceiling/pedestal mount; maximum load 125 lb (56.7 kg)
ST1	Support strut for WM2000/PM2000/PM2010; increases maximum load
WM2000	Wall mount; use with PA2010 adapter and ST1 support strut
WM3026	Wall mount with adjustable head; maximum load 300 lb (136 kg)

## ACCESSORIES

LL27 Series	Low light infrared illuminator
-------------	--------------------------------

Indicates change or addition.



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## PT1280P/PT1280SL Pan/Tilt OUTDOOR, HEAVY DUTY, FEEDTHROUGH

### Product Features

- 120 VAC Operation
- Heavy Duty Adjustable Worm-Gear Final Drive
- Prewired for Zoom Lens, Camera and Enclosure Power, and Video
- 360° Pan Rotation Model Available
- Capable for Auto/Random Scan Operation
- Indoor/Outdoor Applications
- Maximum Load 100 Pounds (45.4 kg)



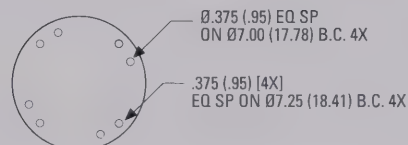
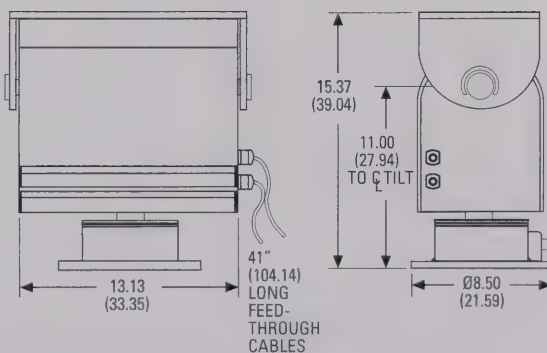
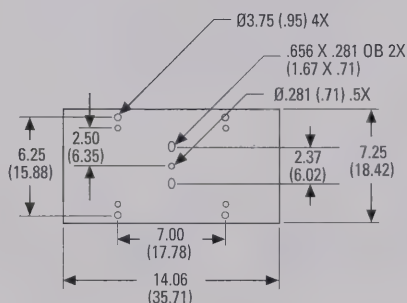
The **PT1280P/PT1280SL** are heavy duty, indoor/outdoor pan/tilts capable of handling loads up to 100 pounds (45.4 kg). They feature rugged high torque AC motors with adjustable worm-gear final drives to ensure long operational life, as well as drift-free operation.

The **PT1280P** Series are capable of auto/random scan operation when used with a Pelco solid-state auto/random scan control. No additional conductors, micro switches, or relays are required for auto scan operation.

These pan/tilts are factory prewired for feedthrough of all control functions — pan/tilt, motorized zoom lens, 24 VAC camera power, enclosure accessories, and video. All connections are made at the input connector, eliminating the need for wiring harnesses in the field. This feature greatly reduces installation time, while increasing the reliability and serviceability of the system.

The **PT1280SL** includes a slip ring option that allows 360-degree pan rotation.

These units can be mounted on Pelco's universal wall/pedestal mounts: the PM2000/PM2010 for pedestal mounting and the WM2000 with PA2010 adapter plate and ST1 support strut or WM3026 for wall mounting. The EH5700 Series large environmental enclosure is also compatible for use with this pan/tilt series.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2379  
MANUAL: 23796

C379 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

PT1280P	Heavy duty pan/tilt, 120 VAC
PT1280P/PP	Same as PT1280P except has presets
PT1280SL	Heavy duty pan/tilt with SL option (360° pan rotation)
PT1280SL/PP	Same as PT1280SL except has presets

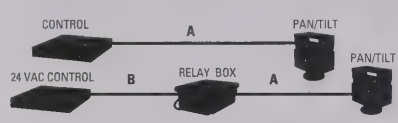
## OPTIONS

FGP/1250P	High speed gearing for pan, 12°/sec
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## ELECTRICAL

Input Voltage	120 VAC, 60 Hz
Power Requirements	
(Running)	Pan 0.48A (57.5 VA)
Tilt 0.48A (57.5 VA)	
(Starting)	Pan 0.60A (72.5 VA)
Tilt 0.60A (72.5 VA)	
Maximum Current	2A per conductor (SL model only)
Connectors	AMP CPC type (mate supplied)
Motors	Two-phase induction type, instantaneous reversing
Limit Switches	5A each (pan and tilt); external adjustment
Conductor Requirements	6 or 7, unshielded. (functions: left, right, up, down, motor common, safety ground). No additional conductors for auto scan when used with solid-state control. PP option requires additional 4 conductors

Maximum Operating Distances

			
	Cable Size	Maximum Distance	
		A	B
<b>PT1280P</b> 6 Conductors	20 AWG (0.5 mm <sup>2</sup> )	489 ft (149 m)	5,800 ft (1,767 m)
	18 AWG (1.0 mm <sup>2</sup> )	778 ft (237 m)	8,250 ft (2,515 m)
	16 AWG (1.5 mm <sup>2</sup> )	1,235 ft (376 m)	13,000 ft (3,962 m)
7* Conductors	20 AWG (0.5 mm <sup>2</sup> )	978 ft (298 m)	
	18 AWG (1.0 mm <sup>2</sup> )	1,556 ft (474 m)	
	16 AWG (1.5 mm <sup>2</sup> )	2,470 ft (752 m)	

\*Using 2 wire motor common

- Notes:**
- Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
  - Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
  - Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## MECHANICAL

Pan	Movement in horizontal plane: 0-355° (PT1280P); 360° (PT1280SL) 6°/sec ±1°
Speed	50 ft-lb with specified voltage
Torque	±90° movement in vertical plane
Tilt	3°/sec ±0.5°
Speed	100 ft-lb with specified voltage
Torque	100 lb (45.4 kg) at 5" (12.7 cm) from tilt table surface to center of gravity
Maximum Load	Adjustable worm-gear final drive
Gearing	
Bearings	Heavy duty ball bearings
Pan	Oilite bronze bushing
Tilt	50% duty cycle; 30 minute rating
Duty Cycle	

## GENERAL

Construction	Aluminum casting and plate; all internal parts corrosion protected
Finish	Gray polyester powder coat
Environment	Indoor/outdoor; -10° to 120°F (-23° to 49°C)
Unit Weight	55 lb (24.9 kg)
Shipping Weight	60 lb (27.2 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 3R standards

## RECOMMENDED CONTROLS

Coaxitron or Matrix	See individual specification sheets for information. Preset pan/tilt must be used with Coaxitron or matrix control with PP capability and preset receiver.
MPTAZ Series	Desktop control (PTZ) with auto/random scan.
RB115	Relay box for 120 VAC pan/tilts. Extends operating distance (control to relay box). Use only with MPT24DT or MPTAZ24DT low voltage control.

## RECOMMENDED ENCLOSURES

EH5700 Series	Environmental enclosure, large
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## RECOMMENDED MOUNTS

PA2010	Adapter plate; required when using WM2000
PM2000, PM2010	Ceiling/pedestal mount; maximum load 125 lb (56.7 kg)
ST1	Support strut for WM2000/PM2000/PM2010
WM2000	Wall mount; use with PA2010 adapter and ST1 support strut
WM3026	Wall mount with adjustable head

## ACCESSORIES

LL27 Series	Low light infrared illuminator.
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Indicates change or addition.



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## PT1260EX Pan/Tilt EXPLOSIONPROOF

### Product Features

- Meets NEMA Type 4X Standards
- 120 or 230 VAC Operation
- Rugged Construction
- For Use in a Variety of Harsh and/or Hazardous Environments
- Heavy Duty Adjustable Worm-Gear Final Drive
- Optional Preset Positioning Capability
- Limit Stops Internally Adjustable
- Indoor/Outdoor Applications
- Maximum Load 100 Pounds (45.4 kg)

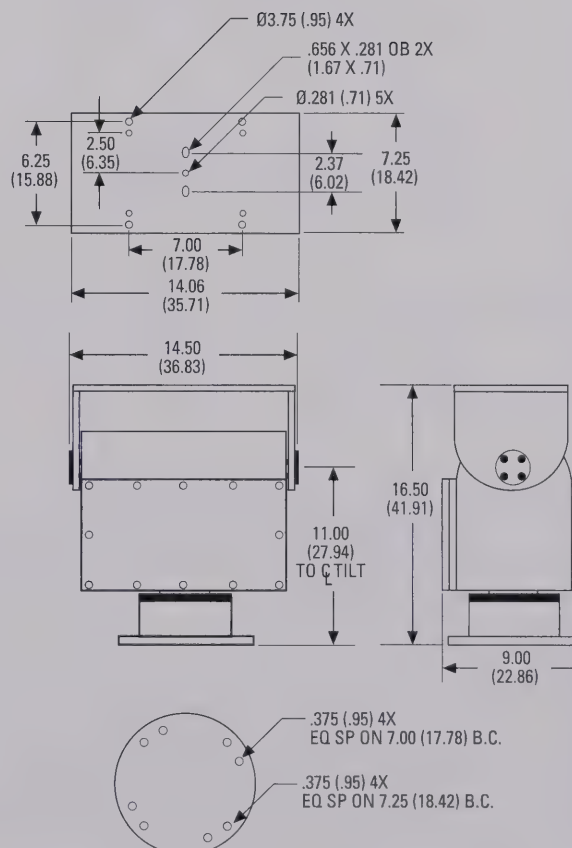


The **PT1260EX** pan/tilt has been engineered to meet the rigorous requirements of explosionproof and dust-ignition-proof electrical equipment installed in Class I (Group C and D) and Class II, (Group E, F, and G) hazardous locations.

Easily capable of handling loads up to 100 pounds (45.4 kg), the **PT1260EX** is ideally suited for use with our EHX\*E Series explosion-proof enclosure for potentially hazardous or combustible applications.

The **PT1260EX** features rugged, high torque AC motors and adjustable worm-gear final drives to ensure long operational life, as well as drift-free operation.

Manufactured from anodized, plate aluminum with all internal and external parts corrosion-protected steel or aluminum. The fasteners are stainless steel fasteners. Pan and tilt limit stops are internally adjustable.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2368  
MANUAL: 23686

C368 / REVISED 10-03

Class I, Class II  
Hazardous Locations



International Organization  
for Standardization  
Registered ISO 9001



PAN/TILT  
EXPLOSIONPROOF

# TECHNICAL SPECIFICATIONS

## MODELS

PT1260EX	Explosionproof/weatherproof pan/tilt, 120 VAC
PT1260EX/220	Same as PT1260EX except 230 VAC operation
PT1260EX/PP	Same as PT1260EX except has preset option. Requires preset control or use with position indication meter AZL
PT1260EX/PP/230	Same as PT1260EX/PP except 230 VAC operation

## ELECTRICAL

		PT1260EX	PT1260EX/220
Input Voltage		120 VAC, 50/60 Hz	230 VAC, 50/60 Hz
Power Requirements			
	(Running) Pan	0.48A (57.5 VA)	0.19A (43.7 VA)
	Tilt	0.48A (57.5 VA)	0.27A (62.1 VA)
	(Starting) Pan	0.60A (72.5 VA)	0.19A (43.7 VA)
	Tilt	0.60A (72.5 VA)	0.27A (62.1 VA)
Connectors		Explosionproof gland (supplied)	
Motors		Two-phase induction type, instantaneous reversing	
Limit Switches		5A each (pan and tilt); internal adjustment	
Conductor Requirements		6, unshielded (functions: left, right, up, down, motor common, safety ground). PP option requires 4 additional conductors	

### Maximum Operating Distances

		Maximum Distance			
		Cable Size		A	B
PT1260EX	6 Conductors	20 AWG (0.5 mm <sup>2</sup> )	489 ft (149 m)	5,800 ft (1,767 m)	
		18 AWG (1.0 mm <sup>2</sup> )	778 ft (237 m)	8,250 ft (2,515 m)	
		16 AWG (1.5 mm <sup>2</sup> )	1,235 ft (376 m)	13,000 ft (3,962 m)	
PT1260EX/220	6 Conductors	20 AWG (0.5 mm <sup>2</sup> )	2,463 ft (750 m)		
		18 AWG (1.0 mm <sup>2</sup> )	3,918 ft (1,194 m)		
		16 AWG (1.5 mm <sup>2</sup> )	6,218 ft (1,895 m)		

- Notes:**
- Distance (A) from control to pan/tilt is the same as distance from relay box to pan/tilt.
  - Maximum operating distance can be extended by using a low voltage control (24 VAC) and a relay box. Distance (B) from control to relay box is the same for all applications.
  - Distances are calculated with both motors (pan and tilt) running and assuming a 10% voltage drop in the cable.

## MECHANICAL

Pan	0-355° movement in horizontal plane
Speed	6°/sec ±1°
Torque	50 ft-lb with specified voltage
Tilt	±90° movement in vertical plane
Speed	3°/sec ±0.5°
Torque	100 ft-lb with specified voltage
Maximum Load	100 lb (45.4 kg) at 5" (12.7 cm) from tilt table surface to center of gravity
Gearing	Adjustable worm-gear final drive to prevent drift and minimize backlash
Bearings	
Pan	Sealed, heavy-duty ball bearings
Tilt	Oilite bronze bushing
Braking	Mechanical
Duty Cycle	50% duty cycle; 30 minute rating

## GENERAL

Construction	Anodized, aluminum plate; all internal and external parts corrosion protected; stainless steel fasteners
Tilt Shaft	Type 316 stainless steel
Finish	Gray polyester powder coat
Environment	Indoor/outdoor operation
Temperature	-10° to 120°F (-23° to 49°C)
Unit Weight	69 lb (31.2 kg)
Shipping Weight	75 lb (34 kg)

## CERTIFICATIONS/RATINGS

- UL Listed (PT1260EX and PT1260EX/PP)
- Meets NEMA Type 4X standards
- For use in Class I (Groups C and D) and Class II (Groups E, F, and G) hazardous locations.

## RECOMMENDED CONTROLS

Coaxitron Matrix	See individual specification sheets for information. Preset pan/tilt must be used with Coaxitron or matrix control with PP capability and preset receiver.
MPTAZ Series	Desktop pan/tilt and zoom lens control with auto/random scan for 120/230/24 VAC pan/tilts.
RB115	Relay box for 120 VAC pan/tilts. Extends operating distance (control to relay box). Use only with MPT24DT or MPTAZ24DT low voltage controls.
RB220	Same as RB115 except for 230 VAC pan/tilts.

## RECOMMENDED ENCLOSURES

EHX*E Series	Explosionproof enclosure
--------------	--------------------------

Indicates change or addition.



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## MOUNTS

### Versatile and Product Specific

#### Camera Mounts

Pelco camera mounts are ideal for ceiling, wall, and T-rail installations. Product line includes mount models with a maximum load capacity of 7 pounds and range up to units with a maximum load capacity of 25 pounds.

#### Dome and Enclosure Mounts

Pelco manufactures a variety of dome and enclosure mounts, including mounts specifically designed for use with our Spectra® Series domes. Here you will find mounts suitable for wall, ceiling, pedestal, corner, pole, and parapet applications. Many models feature cable feedthrough holes to conceal loose wiring. Maximum load capacity varies per mount model and ranges from 20 pounds up to 75 pounds.



#### Scanner, Pan/Tilt Mounts

Pelco offers a variety of mounting options for scanners and pan/tilts. Maximum load capacity varies per mount model and ranges from light-duty with a load capacity of 20 pounds, to heavy-duty with a maximum capacity of up to 300 pounds. Our WM2000/PM2000 Series heavy-duty mounts feature interchangeable components that let you "build" a mount suitable for your application. The WM2000 Series can also be used in corner, pole, and parapet applications when used with the appropriate adapter.

#### Camclosure® Mounts

Pelco offers several mounting adapters for the Camclosure Series of products to increase your mounting options. Adapters are model-specific. Be sure to check the specification sheet for compatible mounts.



#### Esprit® Mounts

Pelco manufactures corner, pedestal, pole, and wall mounts, specifically designed for the Esprit integrated positioning system. Mount models feature a feedthrough system to conceal cabling and wiring. All models are applicable for indoor and outdoor applications.

#### Legacy® Mounts

Pelco makes wall, corner, pole, and parapet mounts specifically designed for the Legacy Series integrated positioning system. The corner, pole, and parapet mounts can also be used for mounting other Pelco products such as Spectra and Esprit. Refer to the individual specification sheets for specific applications and required adapters. Load capacity varies per unit and ranges from 75 pounds up to 175 pounds.

When selecting a mount, be sure that the mount is capable of supporting four times the full load of the equipment. Select only recommended mounts made for the surveillance equipment. Pelco specification sheets list recommended mounts for each product.

Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Mount Selection Guide – Enclosures/Domes
- Mount Selection Guide – Scanners, Pan/Tilts, Positioning Systems

# Mount Selection Guide for Enclosures and Domes

## ENCLOSURES INDOOR, IN-CEILING

Enclosure Model	E1003* (Ceiling)	E2020* (Ceiling)	E2100* (Ceiling)
ED2020		X	
EH2100, EH2100P			X
EH1000	X		
See Page	165	161	163

\*These are optional ceiling mounting adapters that replace a 2-ft x 2-ft ceiling tile.

## INDOOR, GENERAL

Enclosure Model	EM1400 (Wall)	EM1450 (Wall)	EM1900U (Wall)	EM22 (Wall)	EM2400 (Wall)*	EM1109, EM2000, EM2200 (Pipe/Pole)	EM1009U, EM1015U (Pedestal)	MM22 (Pedestal)	EM3000 (Ceiling)*
EH100-8, EH100-10		X	X		X		X		X
EH3010, EH3014	X		X		X	X	X		X
EH4010, EH4014	X		X	X	X	X	X	X	X
See Page	259	263	255	265	259	257	255	265	267

## OUTDOOR

Enclosure Model	EM1400 (Wall)	EM1450 (Wall)	EM1900U (Wall)	EM22 (Wall)	EM2400 (Wall)*	EM3512 (Wall)**	WM2000 (Wall)***	EM1109, EM2000, EM2200 (Pipe/Pole)	EM1009U, EM1015U (Pedestal)	MM22 (Pedestal)	PM2000, PM2010 (Pedestal)	EM3000 (Ceiling)*
EH2500		X			X			X	X			X
EH3508		X	X		X			X	X			X
EH3512		X	X	X	X	X		X	X	X	X ♦	X
EH3515		X	X	X	X			X	X	X	X ♦	X
EH4700	X		X	X	X		X ♦	X	X	X	X ♦	
EH4700DB			X					X +	X			
EH5700				X			X ☆	X	X	X	X ☆	
See Page	259	263	255	265	259	261	285	257	255	265	291	267

## SPECIALTY

Enclosure Model	EM1900U (Wall)	EM22 (Wall)	WM2000 (Wall)***	WM3026 (Wall)	EM1109, EM2000, EM2200 (Pipe/Pole)	EM1009U, EM1015U (Pedestal)	MM22 (Pedestal)	PM2000, PM2010 (Pedestal)
E706 Series	X	X			X	X	X	
EH8104		X			X		X	
EH8106		X	X ☆		X		X	X ☆
EHX4E		X			X		X	
EHX6E, EHX8E			X ☆	X				X ☆
See Page	255	265	285	289	257	255	265	291

\* For indoor use only.

\*\* For use with EH3512, EH3512-2 and EH3512-2HD.

\*\*\* Can also be adapted for corner, pole, and parapet applications when used with appropriate adapter: CM100 (corner), PA102 (pole), or PP100 (parapet).

+ Not for use with EM2200 mount.

♦ Must be used with AH1000 adjustable head.

☆ Must be used with AH2000 adjustable head. Can also use ST1 strut for additional stability (PM2000/PM2010) or support (WM2000).

## HIGH SECURITY

Enclosure Model	EM1400 (Wall)	EM1900U (Wall)	EM22 (Wall)	EM2400 (Wall)*	HSWM12 (Wall)	WM2000 (Wall)**	EM1109, EM2000, EM2200 (Pole)	EM1009U, EM1015U (Pedestal)	MM22 (Pedestal)	PM2000, PM2010 (Pedestal)	E2100 (Ceiling)	HS3020CA (Ceiling/Wall)	HS8000CA (Ceiling)	CM8000 (Corner)
HS2100											X			
HS3020												X		
HS8000													X	X
HS8013														X
HS4012	X	X	X	X	X		X	X	X					
HS4514						X*				X☆				
See Page	259	255	265	259	201	285	257	255	265	291	197	199	189	189

## INTEGRATED CAMERA SYSTEMS

### CAMCLOSURE®

Enclosure Model	ICS100AP (4-S Electrical Box)	ICS100-PG (Pendant Adapter)	ICS150-P (Ceiling Panel)	ICS200-CM (Corner)	ICS300-AP (4-S Electrical Box)	ICS300-COND (Conduit Adapter)
ICS100 Series	X	X▲				
ICS150 Series			X			
ICS200 Series				X		
ICS300 Series					X	X
See Page	269	269	269	269	269	269

## DOMES

### IN-CEILING

Dome Model	DF8A-P (Ceiling Panel)	SD5-P (Ceiling Panel)	DF8A-R (Ceiling, Support Rails)	SCA1 (Ceiling, Support Rails)	DF5S-SMKIT (Surface Mount Adapter)
Spectra® Series		X		X	
DF5 and DF5S Series		X		X	
DF5S Series (only)					X
DF5HD-1		X		X	
DF8A Series	X		X		
See Page	212	47-56, 205	212	47-56, 205	205

### PENDANT

Dome Model	MRCA (Ceiling)*	CM400 (Corner)	SWM-CA, SWM-CA24 (Corner)	PP350, PP351, PP450, PP451 (Parapet)	PP4348 (Parapet)	PP300L/PP301L (Parapet)	PP400 (Parapet)	PA402 (Pole)	SWM-PA-BK, SWM-PA-GY (Pole)	IWM Series (Wall)	MRWA (Wall)*	IDM4018 (Wall)	SWM-BK SWM-GY (Wall)
Spectra® Series	X	X+	X•	X	X+	X+	X+	X+	X•	X	X	X	X
DF5 Series	X	X+	X•	X	X+	X+	X+	X+	X•	X	X	X	X
DF8 (Indoor)	X	X+					X+	X+		X	X	X	
DF8 (Outdoor)	X	X+		X	X+		X+	X+		X	X	X	
See Page	275	301	277	279	307	305	309	303	277	273	275	273	277

\* For indoor use only.

\*\* Can also be adapted for corner, pole, and parapet applications when used with appropriate adapter: CM100 (corner), PA102 (pole), or PP100 (parapet).

\* Must be used with AH2000 adjustable head and ST1 strut.

☆ Must be used with AH2000 adjustable head. (Can also use ST1 strut for additional stability.)

▲ Must be used with SWM-GY wall mount.

✦ Must be used with either the IWM Series or IDM4018 mount.

✦ Must be used with IWM-GY wall mount.

• Must be used with SWM-BK or SWM-GY mount.



## SCANNERS, PAN/TILTS

Scanner, Pan/Tilt Model	PM14 (Wall)	PM105 (Wall)	PSWM (Wall)	WM2000 (Wall)	WM3026 (Wall)	PM2010, PM2000 (Pedestal)	PP100 (Parapet)	PP200 (Parapet)	CM100 (Corner)	PA102 (Pole)
PS20 Series			X			X	X+			
PT270P Series	X	X								
PT280-24P	X	X								
PT570P Series				X*		X	X+	X+	X+	X+
PT680-24P				X*		X	X+	X+	X+	X+
PT1250DC Series				X•	X	X	X+	X+	X+	X+
PT1250P Series				X•	X	X	X+	X+	X+	X+
PT1260EX Series				X•	X	X	X+	X+	X+	X+
PT1280P Series				X•	X	X	X+	X+	X+	X+
See Page	281	283	229	285	289	291	293	295	285	285

+ Must be used with PSWM wall mount.

\* Requires PA2000 adapter. (Use with ST1 strut if load exceeds 75 pounds [34 kg].)

• Must be used with WM2000 wall mount and PA2000 adapter.

☆ Must be used with WM2000 wall mount and PA2000 adapter. (Use with ST1 strut and SCM100 mount if load exceeds 75 pounds [34 kg].)

★ Must be used with WM2000 wall mount and PA2000 adapter. (Use with ST1 strut and SPA102 mount if load exceeds 75 pounds [34 kg].)

• Requires PA2010 adapter and ST1 strut.

◇ Must be used with WM2000 wall mount and PA2010 adapter.

\* Must be used with WM2000 wall mount and PA2010 adapter. (Use with ST1 strut and SCM100 mount if load exceeds 75 pounds [34 kg].)

◇ Must be used with WM2000 wall mount and PA2010 adapter. (Use with ST1 strut and SPA102 mount if load exceeds 75 pounds [34 kg].)

## POSITIONING SYSTEMS

## ESPRIT®

Esprit Model	EWM (Wall)	PM2000, PM2010 (Pedestal)	EPM (Pole)	PP100 (Parapet)	PP300L/PP301L (Parapet)	PP4348 (Parapet)	ECM100 (Corner)
ES3012-2	X	X+	X*	X*	X■	X■	X*
ES3012-2N		X					
ES3012-2W	(included)		X	X	X+	X+	X
ES3012-5	X	X+	X*	X*	X■	X■	X*
ES3012-5N		X					
ES3012-5W	(included)		X	X	X+	X+	X
ES30Cxx-2N, ES30PCxx-2N		X					
ES30Cxx-2W, ES30PCxx-2W	(included)		X	X	X+	X+	X
ES30Cxx-5N, ES30PCxx-5N		X					
ES30Cxx-5W, ES30PCxx-5W	(included)		X	X	X+	X+	X
ES31Cxx-2N, ES31PCxx-2N		X					
ES31Cxx-2W, ES31PCxx-2W	(included)		X	X	X+	X+	X
ES31Cxx-5N, ES31PCxx-5N		X					
ES31Cxx-5W, ES31PCxx-5W	(included)		X	X	X+	X+	X
See Page	297	291	297	293	305	307	297

◆ Must be used with EPP pedestal adapter.

\* Must be used with EWM wall mount.

■ Must be used with EWM wall mount EA4348 adapter.

+ Must be used with EA4348 adapter.

Note: Models with "W" suffix in part number include EWM wall mount, and models with "N" suffix include EPP pedestal adapter.

## LEGACY®

Legacy Model	LWM41 (Wall)	PM2000, PM2010 (Pedestal)	PA402 (Pole)	PP300L, PP301L (Parapet)	PP400 (Parapet)	PP4348 (Parapet)	CM400 (Corner)
PT780P Series P/T	X	X★	X★	X★	X★	X★	X★
See Page	299	291	303	305	309	307	301

★ Must be used with PA2000 pedestal adapter.

★ Must be used with LWM41 wall mount.

## BS1750/CM1750/CM1750S/TB1750 Mount

### WALL, CEILING/PEDESTAL, T-BAR MOUNT FOR CAMERAS

#### Product Features

- Low Cost Camera Mount
- Contemporary Design
- Adjustable Swivel Head
- Supports up to 7 Pounds (3.2 kg)
- Wall, Ceiling, Pedestal, or False T-Rail Mounting
- Optional 4-Inch (10.16 cm) Extender Available



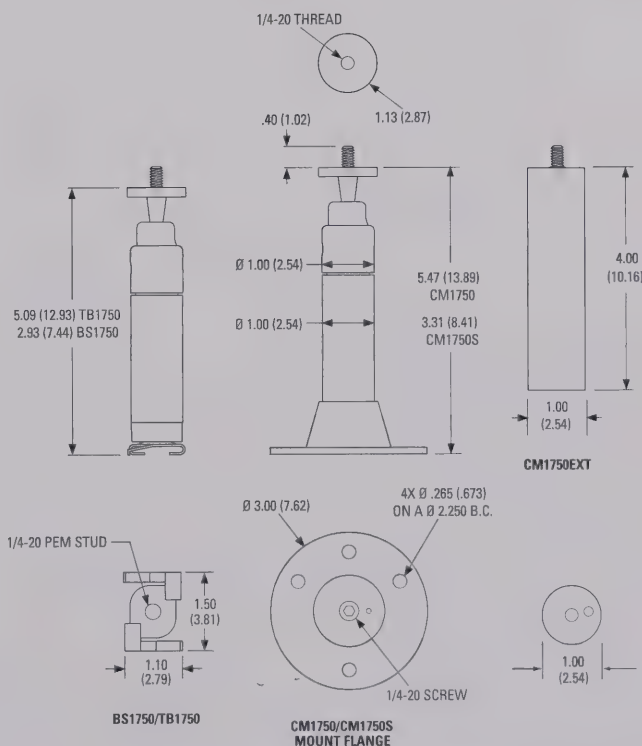
The **CM1750**, **CM1750S**, **TB1750**, and **BS1750** are universal camera mounts designed for use with cameras weighing up to 7 pounds (3.2 kg). All mounts feature an easily adjustable swivel head for camera positioning.

The **CM1750** is primarily designed for ceiling or pedestal mounting, but can also be used as a wall mount. The **CM1750S** is a shorter version of the **CM1750** and is recommended for ceiling or pedestal mounting applications.

The **TB1750** is specifically engineered for mounting on a T-rail in false ceiling applications.

The **BS1750** is the swivel portion of the mount equipped with a T-rail clip for use in T-rail applications requiring a shorter mount.

In addition, an optional 4-inch extender (**CM1750EXT**) is available for use with the **CM1750** or **TB1750** mounts. This simple tube assembly screws in-between the mount and the base, extending the maximum length of the mount by 4 inches (10.2 cm).



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2217

MANUAL: 22186 (BS1750/TB1750/CM1750/CM1750S), 22196 (CM1750EXT)

C217 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

BS1750	Swivel head only with T-rail clip
CM1750	Universal wall, ceiling, or pedestal camera mount with adjustable swivel head
CM1750S	Same as CM1750 except shorter
CM1750EXT	4-inch (10.2 cm) extension tube for use with CM1750 and TB1750 mounts
TB1750	Universal T-rail camera mount with adjustable swivel head for use in false ceilings

## MECHANICAL

Pan Adjustment	360°
Tilt Adjustment	90° maximum
Camera Mounting	1/4-20 threaded stud with nut
Locking Method	Set screw secures swivel assembly (Allen wrench supplied)

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat with black anodized ball/swivel
Maximum Load	7 lb (3.2 kg)
Unit Weight	
BS1750	0.25 lb (0.11 kg)
CM1750	0.50 lb (0.22 kg)
CM1750S	0.30 lb (0.14 kg)
CM1750EXT	0.25 lb (0.11 kg)
TB1750	0.38 lb (0.17 kg)
Shipping Weight	
BS1750	1 lb (0.45 kg)
CM1750	2 lb (0.9 kg)
CM1750S	1 lb (0.45 kg)
CM1750 EXT	1 lb (0.45 kg)
TB1750	1 lb (0.45 kg)

## CERTIFICATIONS

- UL Listed (BS1750, CM1750, CM1750S and TB1750)

Indicates change or addition.



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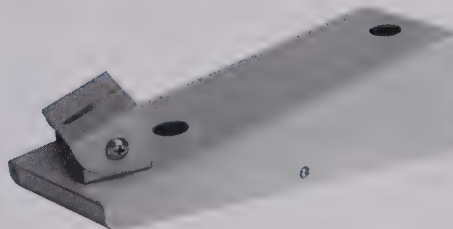


## CM1300 Mount

### WALL MOUNT, CAMERA

#### Product Features

- Low Cost
- Wall Mount Applications
- Can Be Mounted Directly to Standard Electrical Box Using WP13 Adapter
- Cable Feedthrough Holes and Removable Bottom Cover Conceal Wiring
- "Keyhole" Mounting Slots for Easy Installation
- Manually Adjustable Head
- Accommodates Light Duty Cameras up to 25 Pounds (11.25 kg)

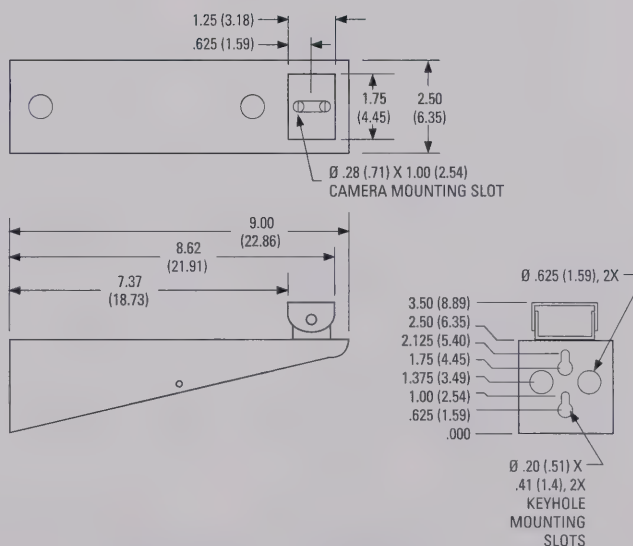


The **CM1300** is a light duty camera mount designed for indoor use and will accommodate cameras weighing up to 25 pounds (11.2 kg).

The **CM1300** is versatile in that it can be mounted directly to a wall or adapted to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box when used with the WP13 adapter.

Manufactured from steel, the **CM1300** features a manually adjustable head, "keyhole" mounting slots, feedthrough holes, and removable bottom cover.

The **CM1300** is inexpensive and easy to install.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX

SPEC: 2216

MANUAL: 22166 (CM1300), 22056 (WP13)

C216 / REVISED 11-98

International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

CM1300 Light duty camera mount with manually adjustable head for wall mount applications

## MECHANICAL

Pan Adjustment 360°  
Tilt Adjustment  $\pm 65^\circ$   
Mounting Method Secure to solid surface with two fasteners (minimum #10 screws recommended)

## GENERAL

Construction 0.047-inch (1.19 mm) thick steel  
Finish Gray polyester powder coat  
Maximum Load 25 lb (11.25 kg)  
Environment Indoor  
Temperature Range 32° to 120°F (0° to 48.89°C)  
Unit Weight  
CM1300 1.28 lb (0.58 kg)  
WP13 .18 lb (.08 kg)  
Shipping Weight  
CM1300 2 lb (0.9 kg)  
WP13 1 lb (0.45 kg)

## OPTIONAL ACCESSORIES

WP13 Wall plate for use in mounting CM1300 to a standard 2 x 4-inch (5.08 x 10.16 cm) electrical box

Indicates change or addition.



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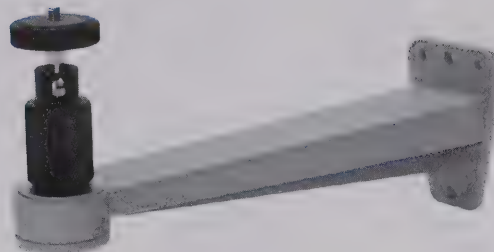


## CM1450 Mount

### WALL MOUNT, CAMERA

#### Product Features

- Low Cost Wall Mount
- Decorator Styling
- Supports up to 7 Pounds (3.2 kg)
- Adjustable Swivel Head
- Accommodates Light-Duty Cameras
- Can be Adapted for Pole Mount Applications With Use of PA101 Adapter

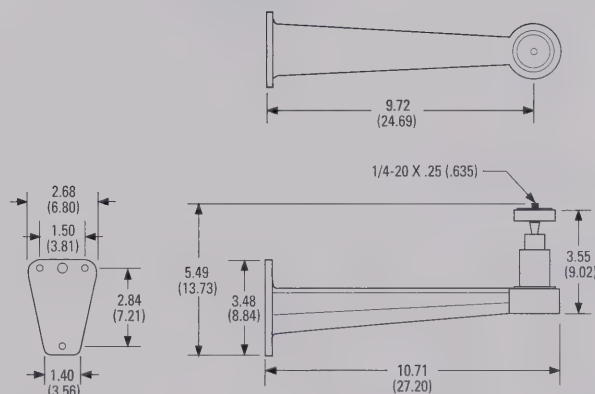


The **CM1450** is a light-duty camera mount designed for wall mount applications.

The **CM1450** is manufactured from aluminum and die-cast for low cost efficiency. It features an easily adjustable swivel head, which allows for 360-degree pan rotation and 90-degree tilt adjustments. The **CM1450** utilizes a set screw for final positioning of the swivel assembly.

The **CM1450** will accommodate cameras weighing up to 7 pounds (3.2 kg).

The **CM1450** can also be adapted for pole mount applications when used with a Pelco PA101 adapter.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2201  
MANUAL: 22016

C201 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001





## MODEL

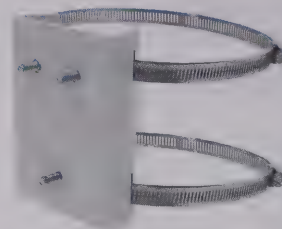
CM1450

Light-duty camera mount with adjustable swivel head for wall mount applications

## RELATED PRODUCT

PA101

Pole mount adapter for CM1450 mount.  
Minimum pole diameter 3 inches (7.62 cm).  
Stainless steel straps supplied. Strap length 28.5 inches (72.39 cm)



PA101 POLE ADAPTER

## MECHANICAL

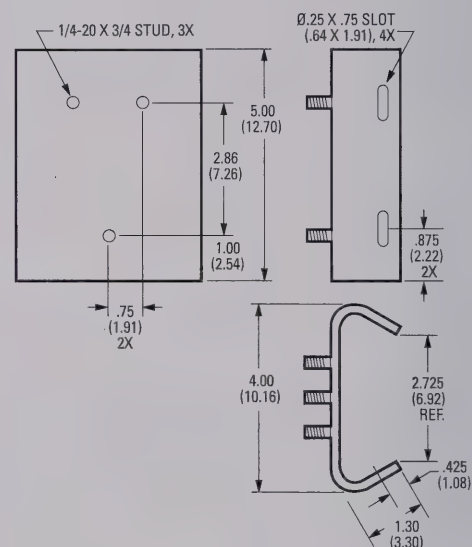
Pan Adjustment	360°
Tilt Adjustment	90°
Locking Method	Set screw secures swivel assembly
Camera Mounting	1/4-20 threaded stud and nut
Mounting Method	Secure with three 1/4-inch diameter fasteners to solid surface or use one 5/16-inch diameter and one 1/4-inch diameter fastener where wall studs are encountered. (Fasteners not supplied.)

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Maximum Load	7 lb (3.2 kg)
Unit Weight	
CM1450	1.2 lb (0.5 kg)
PA101	0.88 lb (0.4 kg)
Shipping Weight	
CM1450	2 lb (0.9 kg)
PA101	2 lb (0.9 kg)

## CERTIFICATIONS

- UL Listed



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

PA101 DIMENSION DRAWING



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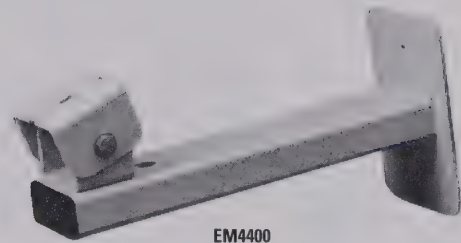
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## CM4400/EM4400 Series Mount

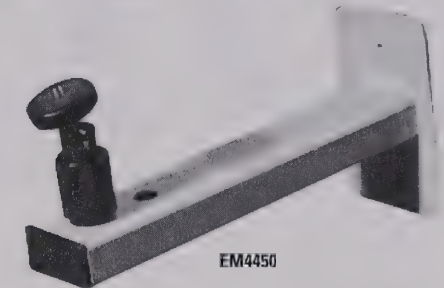
### CEILING/WALL MOUNT, CAMERA

#### Product Features

- Ceiling or Wall Mounting
- Choose from Swivel Head or Adjustable Tilt Table Models
- Cable Feedthrough Hole
- CM4450/EM4450 for Use with Cameras Only
- CM4400/EM4400 Can Also Be Used with Light-Weight Enclosures
- CM4400/EM4400 Support up to 15 Pounds (6.75 kg); CM4450/EM4450 Support up to 7 Pounds (3.15 kg)
- EM4400 and EM4450 can be Mounted to a Single-Outlet, Standard Junction Box



EM4400



EM4450

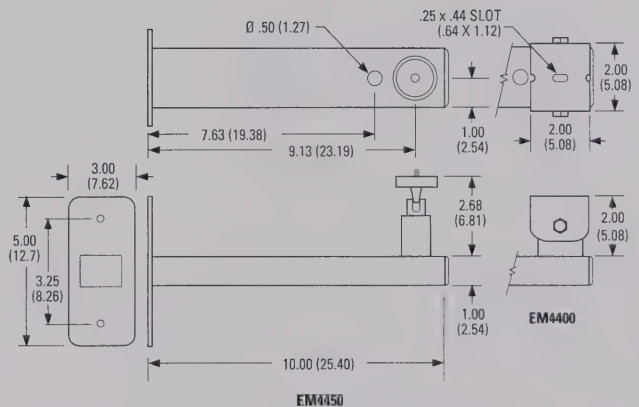
The **CM4400** and **EM4400 Series** are light-duty camera mounts. These mounts are designed primarily for use with lightweight cameras, but they can be used with small camera enclosures, such as the EH3010 and EH3014.

Equipped with an adjustable tilt table and cable feedthrough hole (video coaxial cable and two conductors for camera power), both mounts are capable of supporting up to 15 pounds (6.75 kg). The **CM4400** is for ceiling mount applications and the **EM4400** is for wall mount applications.

The **CM4450** and **EM4450** are light-duty camera mounts and are not recommended for use with enclosures. These mounts feature an adjustable swivel head with set screw for final positioning of the camera and cable feedthrough hole (video coaxial cable and two conductors for camera power). They are designed for use with cameras weighing up to 7 pounds (3.15 kg). The **CM4450** is for ceiling mount applications and the **EM4450** is for wall mount applications.

In addition, the **EM4400** and **EM4450** can be mounted directly to any single-outlet, standard junction box.

All mounts in this series are for indoor use only.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

EM4400/EM4450 DIMENSION DRAWING



DataFAX  
SPEC: 2244  
MANUAL: 22446

C244 / REVISED 10-00



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CM4400	Light-duty ceiling J-mount with cable feedthrough hole and manually adjustable tilt table. For use with lightweight cameras and enclosures.
CM4450	Light-duty ceiling J-mount with cable feedthrough hole and manually adjustable tilt table. For use with lightweight cameras only.
EM4400	Light-duty wall mount with cable feedthrough hole and manually adjustable tilt table. For use with lightweight cameras and enclosures.
EM4450	Light-duty wall mount with cable feedthrough hole and swivel head. For use with lightweight cameras only.

## MECHANICAL

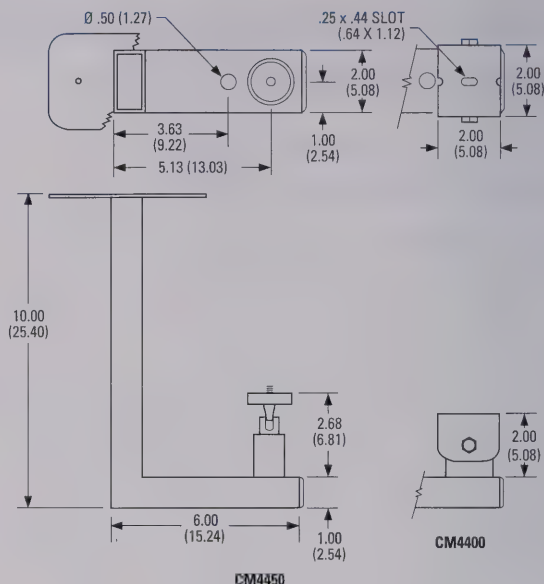
Pan Adjustment	Unlimited 360°
Tilt Adjustment	±90°
Locking Method	Three 1/4-20 hex head bolts Set screw secures swivel assembly
Camera Mounting	1/4-20 mounting bolt (supplied) 1/4-20 threaded stud and nut
Enclosure Mounting	
Maximum Load	CM4400/EM4400 15 lb (6.75 kg) CM4450/EM4450 7 lb (3.15 kg)

## GENERAL

Construction	Steel
Finish	Gray polyester powder coat
Unit Weight	
CM4400	3.62 lb (1.64 kg)
CM4450	1.35 lb (0.61 kg)
EM4400	2.70 lb (1.22 kg)
EM4450	2.34 lb (1.06 kg)
Shipping Weight	
CM4400	5 lb (2.26 kg)
CM4450	3 lb (1.35 kg)
EM4400	4 lb (1.81 kg)
EM4450	3 lb (1.35 kg)

## CERTIFICATIONS

- UL Listed (CM4450 only)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

CM4400/CM4450 DIMENSION DRAWING



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## EM1000U Series Mount

### CEILING/PEDESTAL/WALL MOUNT, MEDIUM DUTY, ENCLOSURE

#### Product Features

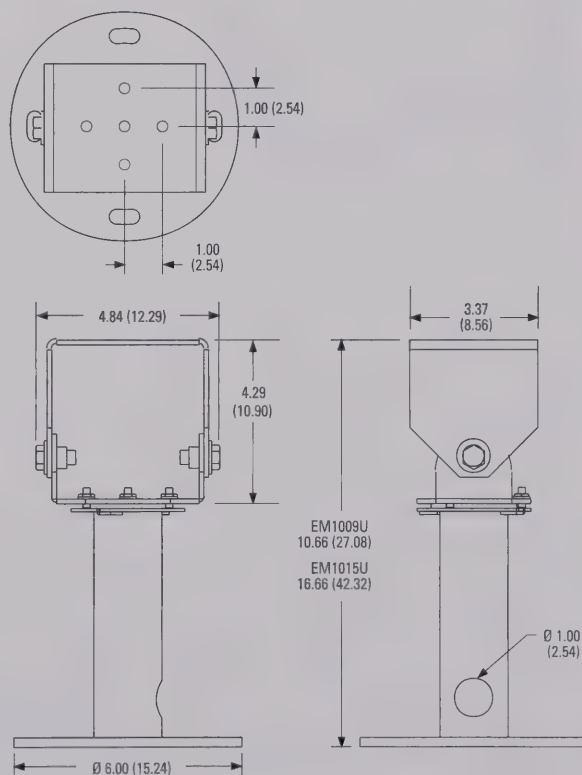
- Adjustable Swivel Head
- Supports up to 40 Pounds (18.14 kg)
- Cable Feedthrough Holes Conceal Wiring
- Accommodates Medium Duty Pelco Enclosures with 2-Inch (5.08 cm) Mounting Hole Pattern
- Ceiling, Pedestal, or Wall Mounting

The **EM1009U/EM1015U/EM1900U** are medium duty enclosure mounts capable of supporting loads up to 40 pounds (18.14 kg). Designed for ceiling/pedestal and wall applications, these versatile mounts can be used with Pelco enclosures having a 2-inch (5.08 cm) mounting hole pattern.

The **EM1009U/EM1015U** are ceiling/pedestal mounts and the **EM1900U** is a 90-degree wall mount. The ceiling/pedestal mounts are available in two lengths: 11 inches (27.94 cm) (**EM1009U**) and 17 inches (43.18 cm) (**EM1015U**). The **EM1900U** extends 15 inches (38.10 cm) from the wall to allow unlimited positioning of the enclosure.

Constructed of aluminum, all three mounts feature an adjustable swivel head, which allows mechanical positioning of the enclosure. In addition, there is a 1-inch (2.54 cm) diameter cable feedthrough hole and openings in the top and bottom to conceal the wiring.

These universal medium duty mounts are just another example of the many products we have designed for your ease of installation, while at the same time providing an aesthetically pleasing appearance.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

EM1009U/EM1015U DIMENSION DRAWING



DataFAX  
SPEC: 2202  
MANUAL: 22026

C202 / REVISED 11-98



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

EM1009U	Universal medium duty ceiling/pedestal mount with manually adjustable swivel head, 11-inch (27.94 cm) length
EM1015U	Universal medium duty ceiling/pedestal mount with manually adjustable swivel head, 17-inch (43.18 cm) length
EM1900U	Universal medium duty 90° wall mount with manually adjustable swivel head; extends 15 inches (38.10 cm) from wall

## MECHANICAL

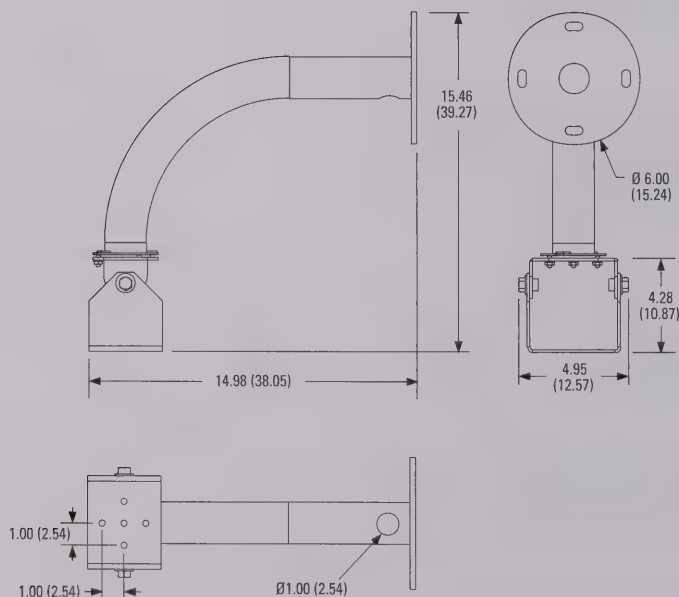
Pan Adjustment	360°
Tilt Adjustment	75° (up or down)

## GENERAL

Enclosure Mounting Suggested Mounting Method	Two 1/4-20 mounting bolts (supplied) Secure to solid surface with a minimum of two 1/4-20 fasteners (not supplied). (For maximum stability use four fasteners.)
Cable Feedthrough	One 1-inch (2.54 cm) diameter hole at base of mount
Maximum Load	40 lb (18.14 kg)
Locking Method	3/8-16 hex head bolts on adjustable swivel head
Construction	Aluminum
Finish	Gray polyester powder coat
Unit Weight	
EM1009U	1.98 lb (.90 kg)
EM1015U	2.43 lb (1.10 kg)
EM1900U	2.83 lb (1.28 kg)
Shipping Weight	
EM1009U	3 lb (1.35 kg)
EM1015U	5 lb (2.26 kg)
EM1900U	5 lb (2.26 kg)

## CERTIFICATIONS

- UL Listed



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EM1900U DIMENSION DRAWING



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## EM1109/EM2000/EM2200 Mount PIPE/POLE MOUNT, MEDIUM DUTY, ENCLOSURE

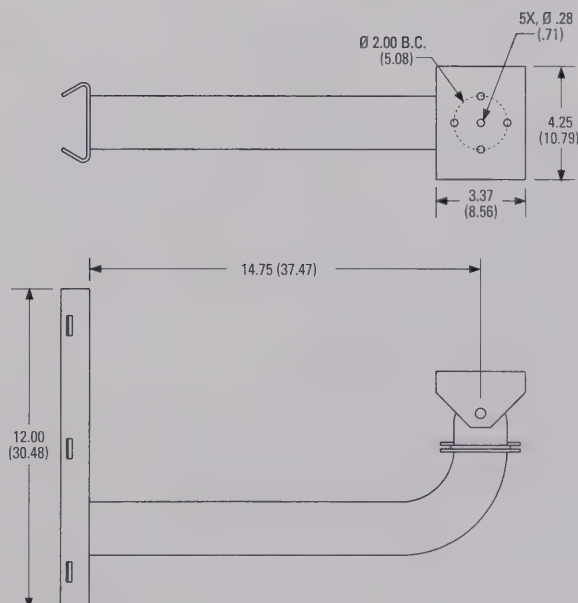
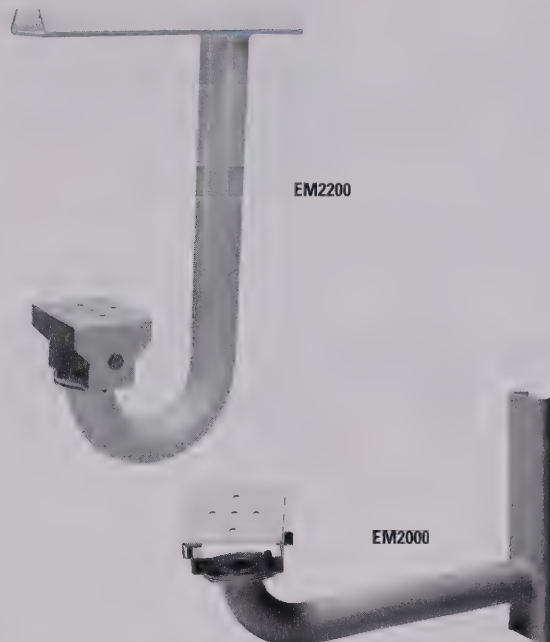
### Product Features

- Low Cost
- Manually Adjustable Swivel Head
- Cable Feedthrough Hole
- Supports up to 40 Pounds (18.14 kg)
- Mounts on Vertical or Horizontal Pipe/Pole (see model description); Mounting Straps Included
- Compatible with Most Pelco Enclosures Having a 2-Inch (5.08 cm) Mounting Pole Pattern

The **EM1109/EM2000/EM2200** are medium duty enclosure mounts designed for applications where mounting on a pipe or pole is necessary. These mounts can be used with Pelco enclosures having a 2-inch (5.08 cm) mounting hole pattern and are capable of supporting up to 40 pounds (18.14 kg). All three mounts feature a manually adjustable swivel head and a cable feedthrough hole to conceal wiring. Multiple mounting holes on the tilt table provide maximum 360-degree horizontal positioning of the enclosure.

The **EM1109** is a pedestal mount for use on a horizontal or vertical pipe or pole. The **EM2000** is a J-type mount for use on a vertical pipe or pole, and the **EM2200** is a "hook" type mount for use on a horizontal pipe or pole. The **EM1109/EM2000/EM2200** must be mounted on pipes or poles having a minimum 3-inch (7.62 cm) diameter. Mounts are secured to the pipe or pole with stainless steel mounting straps. The straps are 28.5 inches (72.39 cm) in length. Two 1/4-20 mounting bolts required to secure the enclosure to the mount are also supplied.

The **EM1109/EM2000/EM2200** are constructed of aluminum and have a white epoxy powder coat finish.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

EM2200 DIMENSION DRAWING



DataFAX  
SPEC: 2207  
MANUAL: 22076

C207 / REVISED 10-00

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

EM1109	Medium duty pedestal mount for horizontal or vertical pipe or pole applications. Manually adjustable swivel head and cable feedthrough hole.
EM2000	Medium duty 90 degree J-mount for vertical pipe or pole applications. Manually adjustable swivel head and cable feedthrough hole.
EM2200	Medium duty "hook" mount for horizontal pipe or pole applications. Manually adjustable swivel head and cable feedthrough hole.

## MECHANICAL

Pan Adjustment	Unlimited 360°
Tilt Adjustment	±75°
Locking Method	3/8-16 hex head bolts (on manually adjustable swivel head)

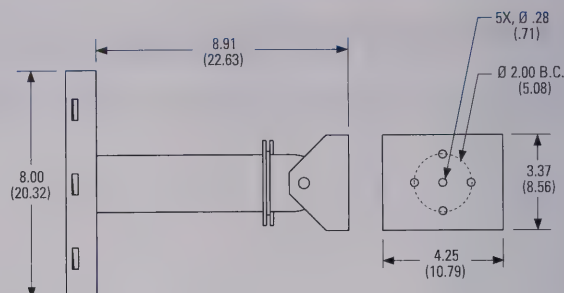
## GENERAL

Suggested Mounting Method	Slots provided for mounting straps; three stainless steel straps supplied. Strap length 28.5 inches (72.39 cm)
Enclosure Mounting	Two 1/4-20 mounting bolts (supplied)
Maximum Load	40 lb (18.14 kg)
Construction	Aluminum
Finish	White epoxy polyester powder coat
Environment	Indoor/outdoor
Unit Weight	
EM1109	1.88 lb (0.85 kg)
EM2000	3.05 lb (1.38 kg)
EM2200	3.51 lb (1.59 kg)
Shipping Weight	
EM1109	3 lb (1.36 kg)
EM2000	8 lb (3.6 kg)
EM2200	9 lb (4.1 kg)

## RECOMMENDED ENCLOSURES

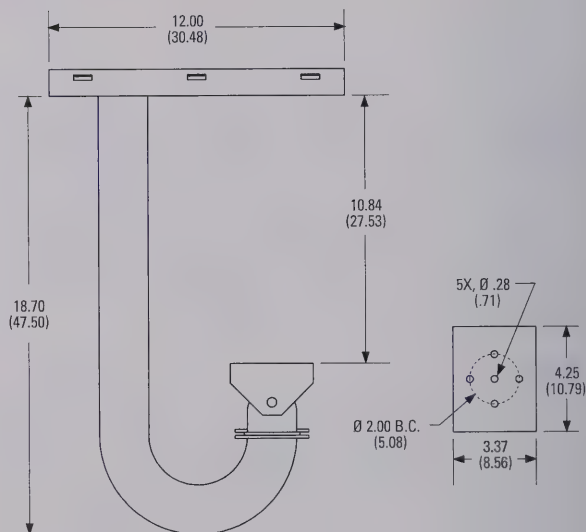
Pelco enclosures having a 2-inch (5.08 cm) mounting hole pattern can be used with these mounts. Be sure the enclosure/camera/lens combination you select does not exceed 40 pounds (18 kg) and is suitable for the type of mount you have selected. The following lists most applicable enclosures.

EH3010/EH3014 Series  
 EH4010 EH4014 Series  
 EH3508 Series, Environmental  
 EH3512/EH3515 Series, Environmental  
 EH4700 Series, Environmental  
 EH4700DB Series, Environmental  
 E700 Series, Dust-Tight  
 EH4E, Explosion-Proof  
 EH8100 Series, Pressurized  
 HS4012, High Security



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EM1109 DIMENSION DRAWING



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EM2200 DIMENSION DRAWING

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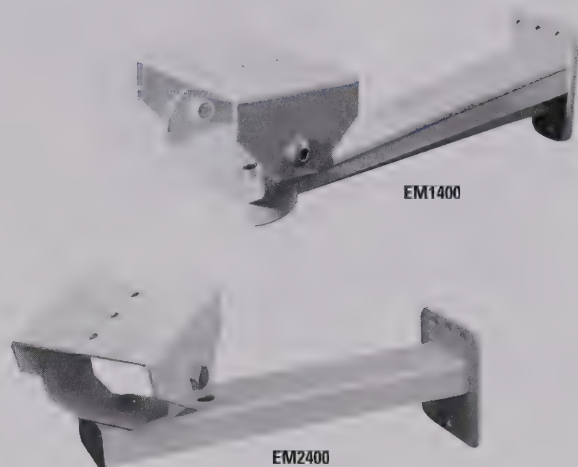
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## EM1400/EM2400 Mount

### WALL MOUNT, LIGHT-DUTY, ENCLOSURE

#### Product Features

- Light Duty Wall Mount
- Adjustable Head
- Supports up to 20 Pounds (9.07 kg)
- Accommodates EH4000 Series Enclosures and Light-to-Medium-Weight Cameras
- Cable Feedthrough Hole Conceals Wiring (EM2400 only)
- Can be Adapted for Pole Mount Applications With Use of PA101 Adapter

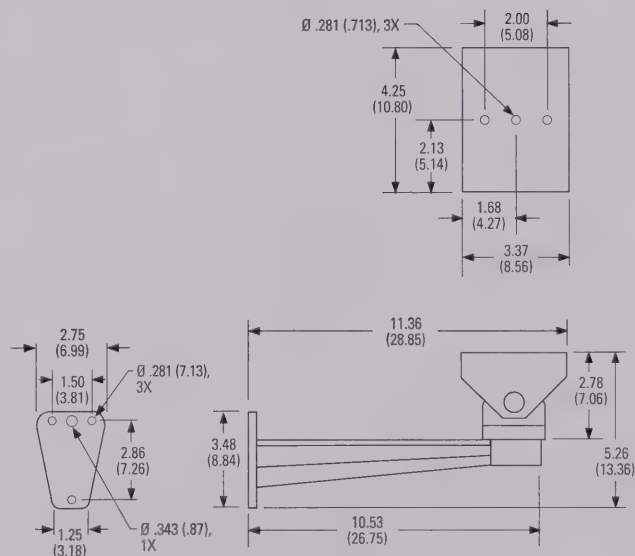


The **EM1400** and **EM2400** are light duty wall mounts capable of supporting a maximum load of 20 pounds (9.07 kg). These mounts are primarily for use with our EH4010 and EH4014 enclosures, but they can be used with other lightweight enclosures or light-to-medium-weight large format cameras.

The **EM1400** features a die-cast arm with an adjustable head, which allows mechanical positioning of the camera or enclosure.

The **EM2400** is constructed of aluminum and also features an adjustable head, which allows mechanical positioning of the camera or enclosure. In addition to the removable front end cap, there is also a half-inch diameter cable feedthrough hole in the mounting arm that conceals the camera or enclosure wiring.

In addition, the **EM1400** and **EM2400** can be adapted for pole mount applications when used with the PA101 pole mount adapter.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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EM1400 DIMENSION DRAWING



DataFAX  
SPEC: 2260  
MANUAL: 22606 (EM1400), 22676 (EM2400)

C260 / REVISED 10-02



International Organization  
for Standardization,  
Registered ISO 9001



## MODELS

EM1400

Light duty wall mount for EH4010/EH4014 enclosures and light-to-medium-weight large format cameras; manually adjustable swivel head.

EM2400

Light duty wall mount with cable feedthrough for EH4010/EH4014 enclosures and light-to-medium-weight large format cameras; manually adjustable swivel head.

## MECHANICAL

Pan adjustment

360°

Tilt Adjustment

EM1400

±75°

EM2400

±90°

## GENERAL

Enclosure Mounting

Two 1/4-20 x 0.625 hex head machine screws (supplied)

Suggested

Mounting Method

Secure to solid surface with three 1/4-inch diameter fasteners (not supplied) or use one 5/16-inch diameter and one 1/4-inch diameter fastener for center mount holes in applications where wall studs are encountered

Cable Feedthrough  
(EM2400 only)

One 0.50-inch (1.27 cm) diameter hole in mount arm

Construction

EM1400

Die-cast zinc

EM2400

Aluminum

Finish

Gray polyester powder coat

Maximum Load

20 lb (9 kg)

Unit Weight

EM1400

1.56 lb (0.71 kg)

EM2400

2.75 lb (1.25 kg)

PA101

0.88 lb (0.40 kg)

Shipping Weight

EM1400

3 lb (1.35 kg)

EM2400

4 lb (1.81 kg)

PA101

2 lb (0.90 kg)

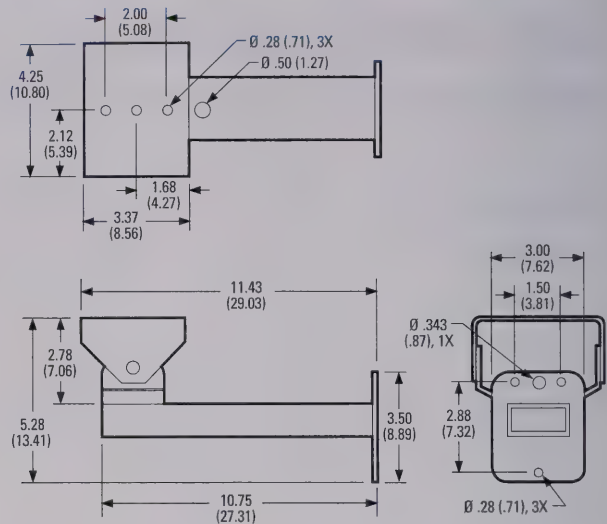
## CERTIFICATIONS

- UL Listed (model EM1400 only)

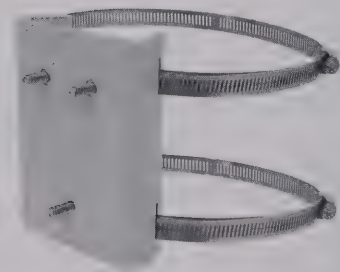
## OPTIONAL MOUNT ADAPTER

PA101

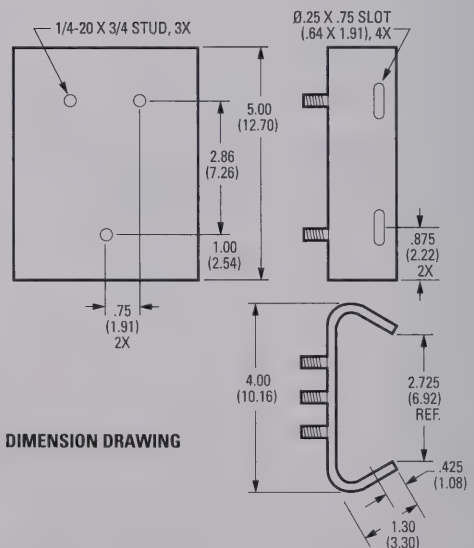
Pole mount adapter for EM1400 and EM2400 mounts. Minimum pole diameter 3 inches (7.62 cm). Stainless steel straps provided. Strap length 28.5 inches (72.39 cm).



EM2400 DIMENSION DRAWING



PA101 POLE ADAPTER



PA101 DIMENSION DRAWING

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# EM3512 Mount

## WALL MOUNT, EH3512 ENCLOSURE, 24 VAC

### Product Features

- Specifically Designed for EH3512 Enclosures That Use 24 VAC
- Wiring Concealed Inside Mount
- Video, Power Wiring Pre-Installed
- Adjustable Pan/Tilt Head
- Mounts to Wall or Electrical Box
- Pole, Corner Mount Adapters Available



EM3512 MOUNT WITH EH3512 ENCLOSURE

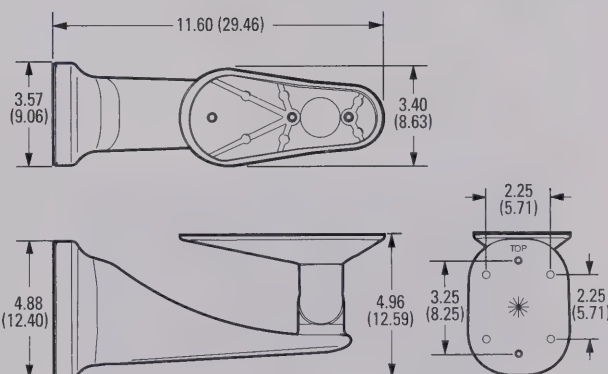
The **EM3512** feedthrough wall mount provides an attractive indoor/outdoor mount for **EH3512** enclosures that use 24 VAC power. Specifically, it is designed for use with the EH3512 enclosure (when a 24 VAC camera is installed), the EH3512-2, and the EH3512-2HD.

All wiring is concealed inside the mount. With the video and power wiring pre-installed, hook-up is easy and simple.

The mount can be attached to a wall surface or a single-gang electrical box. The PA3512 pole mount adapter is available for attaching the mount to a pole, and CM3512 corner mount adapter can be used for installation of the mount on the corner of a building.

An adjustable head allows 320 degrees of horizontal rotation. Tilt adjustment can be up to 90 degrees above or below the horizontal position.

The **EM3512** is constructed of aluminum and has a gray powder coat finish.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX

SPEC: 2277

MANUAL: 22686 (EM2512), 22696 (CM3512), 22716 (PA3512)

C277 / NEW 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

EM3512

Light duty wall mount with manually adjustable head

## RELATED PRODUCTS

CM3512

Corner mount adapter for EM3512 mount

PA3512

Pole mount adapter for EM3512 mount.  
Minimum pole diameter 3 inches (7.62 cm).  
Stainless steel straps supplied. Strap length 28.5 inches (72.39 cm).

## MECHANICAL

Pan Adjustment

320°

Tilt Adjustment

±90°

Locking Method

Button screws; 1/8-inch hex wrench supplied

## GENERAL

Environment

Indoor/outdoor

Construction

Aluminum

Finish

Gray polyester powder coat

## CERTIFICATIONS

- UL Listed
- UL Listed to Canadian safety standards

## MOUNTING METHOD

Wall mount

Mount attaches to wall surface with four 1/4-inch diameter fasteners. Only two fasteners are required if mounting to a 2x4 stud. Fasteners are not supplied.

Corner adapter

Corner adapter attaches to mounting surface with four 1/4-inch diameter fasteners (not supplied). Includes hardware to attach mount to corner adapter

Pole adapter

Pole adapter attaches to a pole with two stainless steel straps (supplied). Stainless steel straps are 28.5 inches (72.39 cm) in length; straps fit pole with a minimum diameter of 3 inches (7.62 cm). Includes hardware to attach mount to pole adapter

Electrical box

Electrical box attaches to wall stud with hardware (not supplied) sufficient to penetrate wall stud 1 inch (2.54 cm). Electrical box includes screws to attach mount

Enclosure Mounting

EH3512 enclosure attaches to mount with two 1/4-20 x 7/8-inch Phillips screws (provided)

Cable Entry

Through hole in mounting plate or through 0.5-inch (1.27 cm) conduit opening in bottom of mount

Weights

EM3512

Unit

1.95 lb (0.88 kg)

Shipping

4 lb (1.81 kg)

CM3512

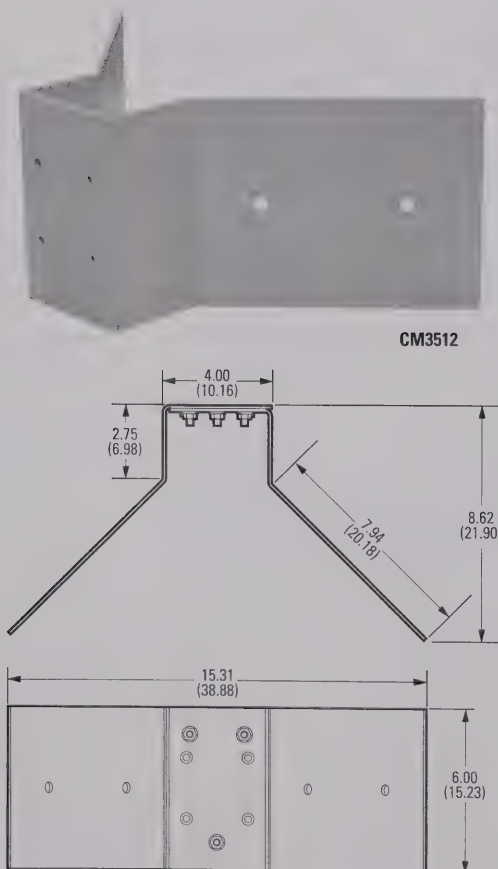
2.20 lb (1.00 kg)

4 lb (1.81 kg)

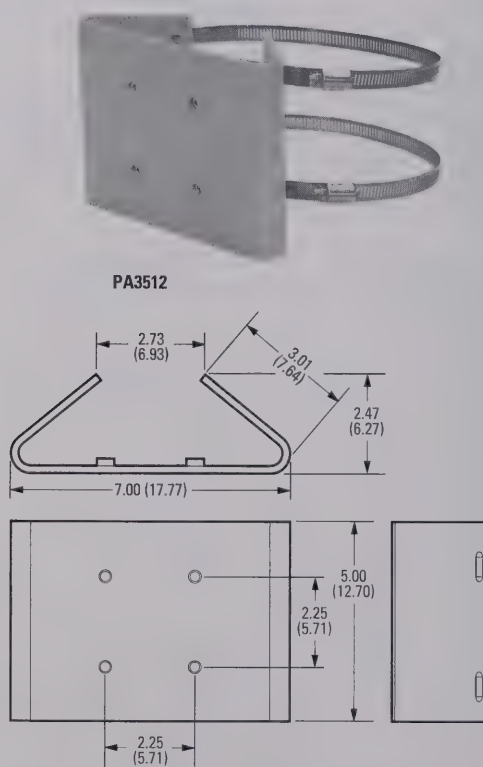
PA3512

1.40 lb (0.64 kg)

2 lb (0.91 kg)



CM3512



PA3512

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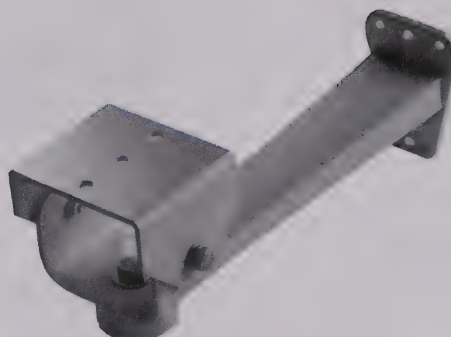


## EM1450 Mount

### WALL MOUNT, LIGHT DUTY, ENCLOSURE

#### Product Features

- Light Duty Wall Mount
- Maximum Load 20 Pounds (9 kg)
- For Use with EH3500 Series Enclosures
- Adjustable Head for Mechanical Positioning of the Enclosure
- Can Be Adapted for Pole Mount Applications With Use of PA101 Adapter

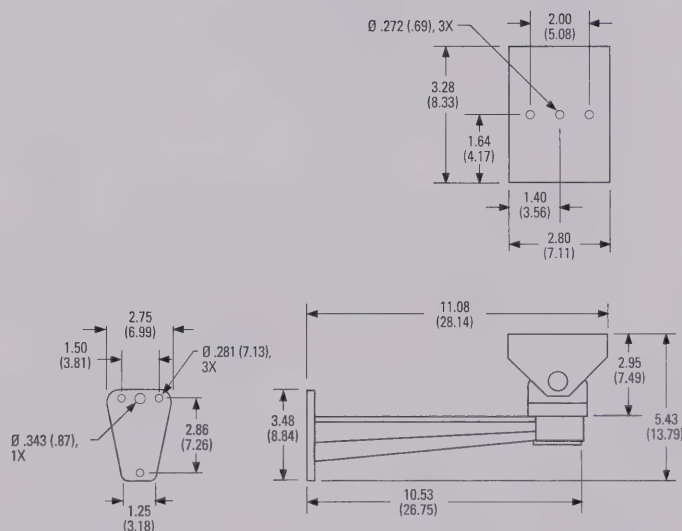


The **EM1450** is a light duty wall mount designed specifically for use with Pelco's EH3500 Series enclosures.

Manufactured from die-cast aluminum, the **EM1450** is capable of supporting a maximum load of 20 pounds (9 kg) and can be safely mounted to any vertical load-bearing surface.

Similar in design to our EM1400 mount, the **EM1450** features a smaller adjustable mounting head that is less obtrusive and provides ample clearance between the cable feedthrough glands and the mounting head.

The **EM1450** can also be adapted for pole mount applications when used with our PA101 adapter.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 2261  
MANUAL: 22616

C261 / REVISED 10-01

International Organization  
for Standardization  
Registered ISO 9001





## MODEL

EM1450

Light duty wall mount for use with EH3500 series enclosures

## RELATED PRODUCT

PA101

Pole mount adapter for EM1450 mount.  
Minimum pole diameter 3 inches (7.62 cm).  
Stainless steel straps supplied. Strap length 28.5 inches (72.39 cm).

## MECHANICAL

Pan Adjustment  
Tilt Adjustment

360°  
±75°

## GENERAL

Suggested  
Mounting Method

Secure to wall with three 1/4-inch diameter fasteners (not supplied) or use one 5/16-inch diameter and one 1/4-inch diameter fastener for center mount holes in applications where wall studs are encountered

Enclosure Mounting

Two 1/4-20 x 0.500 hex head machine screws (supplied)

Maximum Load

20 lb (9 kg)

Construction

Die-cast aluminum

Finish

Gray polyester powder coat

Environment

Indoor/outdoor

Unit Weight

EM1450

2 lb (0.90 kg)

PA101

0.88 lb (0.40 kg)

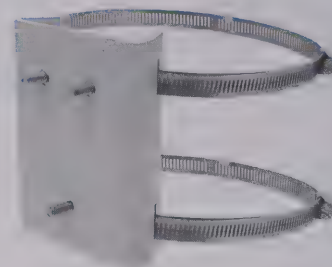
Shipping Weight

EM1450

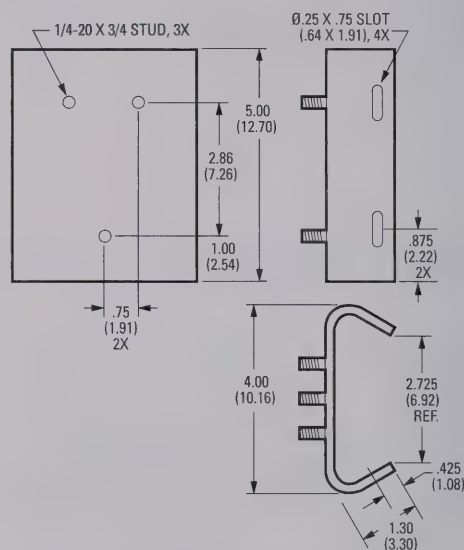
3 lb (1.36 kg)

PA101

2 lb (0.90 kg)



PA101 POLE ADAPTER



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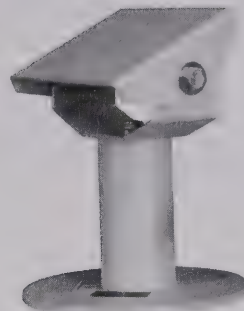


## EM22/MM22 Mount

### CEILING/PEDESTAL/WALL MOUNT, MEDIUM DUTY, ENCLOSURE

#### Product Features

- Economical
- Indoor/Outdoor
- Supports up to 40 Pounds (18.14 kg)
- Sturdy Construction
- For Use with Medium Duty Enclosures
- Fully Adjustable Swivel Head
- Wall or Pedestal/Ceiling Mounting Applications
- EM22 Can Be Adapted for Pole Applications With Use of PA100 Adapter



MM22

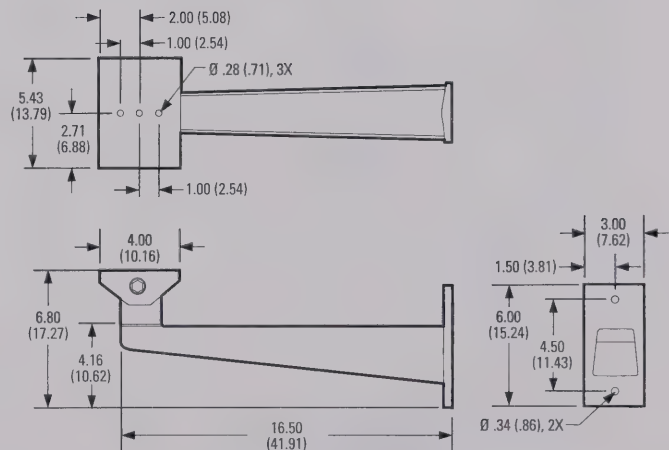


EM22

The **EM22** and **MM22** have been designed and engineered for use with various Pelco enclosures. The **EM22** mounts to a wall or other vertical surface and features a cast-aluminum wall arm which minimizes undesired horizontal movement. The **MM22** is a pedestal/ceiling mount and can be mounted on any flat surface.

Both units feature a fully adjustable swivel head allowing 360-degree horizontal movement. Fabricated from corrosion-resistant aluminum, each unit will support loads up to 40 pounds (18.14 kg).

In addition, the **EM22** can be adapted for pole mount applications when used with the PA100 mount adapter.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

EM22 DIMENSION DRAWING



DataFAX

SPEC: 2227

MANUAL: 22276 (EM22), 22286 (MM22)

C227 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

EM22	Medium duty wall mount for enclosures and light-to-medium-weight cameras; manually adjustable swivel head
MM22	Medium duty ceiling/pedestal mount for enclosures and light-to-medium-weight cameras; manually adjustable swivel head

## RELATED PRODUCTS

PA100	Pole mount adapter for EM22 mount. Minimum pole diameter 1.5 inches (3.8 cm). Stainless steel straps supplied. Strap length 28.5 inches (72.39 cm).
-------	---

## MECHANICAL

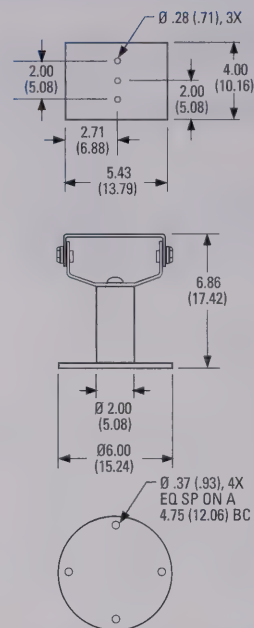
Pan Adjustment	360°
Tilt Adjustment	75°
Camera/Enclosure Mounting	Two each 1/4-20 x 5/8" mounting bolts, split washers and flat washers
Locking Method	3/8-16 hex head bolts

## GENERAL

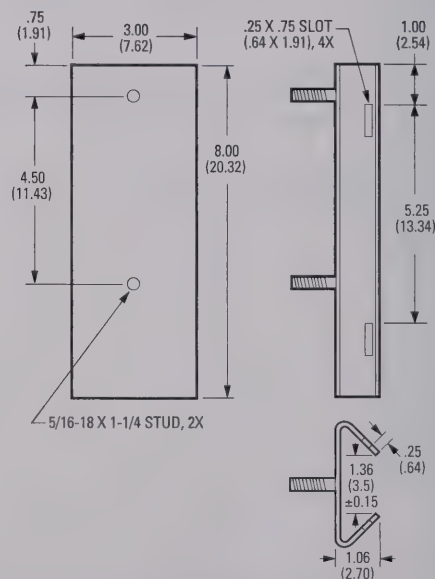
Construction	Cast-aluminum wall arm with aluminum adjustable head
EM22	Aluminum billet with aluminum adjustable head
MM22	Gray polyester powder coat
Maximum Load	40 lb (18.14 kg)
Unit Weight	
EM22	3.05 lb (1.39 kg)
MM22	2.60 lb (1.18 kg)
PA100	0.86 lb (0.39 kg)
Shipping Weight	
EM22	4 lb (1.81 kg)
MM22	4 lb (1.81 kg)
PA100	2 lb (0.90 kg)

## CERTIFICATIONS

- UL Listed



MM22 DIMENSION DRAWING



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

PA100 DIMENSION DRAWING

PA100  
POLE ADAPTER



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# EM3000 Mount

## CEILING MOUNT, LIGHT DUTY, ENCLOSURE

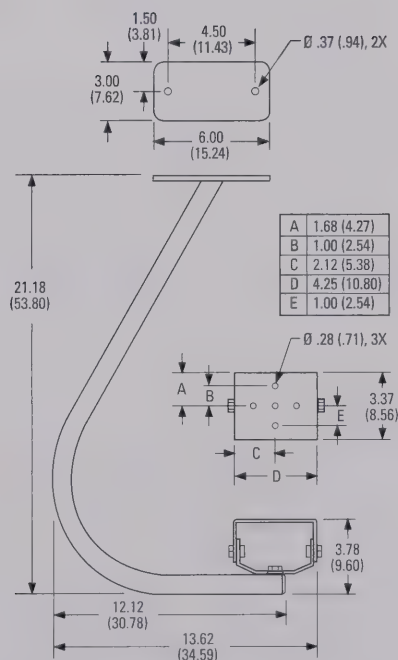
### Product Features

- Easy Installation
- Ceiling J-Mount
- Supports up to 20 Pounds (9.07 kg)
- Contemporary Design
- Manually Adjustable Tilt Table
- 360° Pan Rotation; 75° Tilt Angle (Up or Down)

The **EM3000** is a light duty ceiling J-mount designed for use with EH3010/EH3014 and EH4010/EH4014 enclosures. Additionally, the **EM3000** can also be used with light-to-medium-weight large format cameras.

This mount is for indoor ceiling mounting applications and is capable of supporting loads up to 20 pounds (9.07 kg).

The **EM3000** has an adjustable head for precise mechanical positioning of the camera or enclosure.



DataFAX  
SPEC: 2262  
MANUAL: 22626

C262 / REVISED 11-98



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

EM3000

Light duty ceiling J-mount for use with EH3010/EH3014 and EH4010/EH4014 enclosures and light-to-medium-weight large format cameras; for indoor use only.

## MECHANICAL

Pan Adjustment  
Tilt Adjustment  
Enclosure Mounting  
Suggested Mounting  
Method

Unlimited 360°  
75° (up or down)  
Two 1/4-20 x 5/8" hex head machine screws  
  
Secure to solid surface with two 1/4-inch diameter fasteners

## GENERAL

Construction  
Finish  
Maximum Load  
Unit Weight  
Shipping Weight

Steel  
Gray polyester powder coat  
20 lb (9.07 kg)  
4.27 lb (1.94 kg)  
6 lb (2.71 kg)

## CERTIFICATIONS

- UL Listed



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## Camclosure® Series Mounts

### CORNER, POLE AND WALL

#### Product Features

- For Use with Camclosure Series Integrated Camera Systems
  - Pendant and Electrical Box Adapters for ICS100 Series
  - Ceiling Panel for ICS150 Series
  - Corner Mount for ICS200 Series
  - Conduit and Electrical Box Adapters for ICS300 Series
- Easy to Install
- Aluminum Construction
- Economical
- For Indoor or Outdoor Applications



ICS100-PG SHOWN WITH  
ICS100 DOME AND  
SWM-GY MOUNT

The **ICS Series** mounts offer alternative mounting options for Pelco's Camclosure® Series integrated camera systems. Constructed of aluminum, these economical mounts are designed specifically for the Camclosure Series.

The **ICS100-PG** is a pendant mount adapter designed for the ICS100 Camclosure integrated camera system. The **ICS100-PG** adapts the ICS100 Camclosure dome for pendant/wall installations using an optional SWM or IWM Series mount.

The **ICS100-AP** and **ICS300-AP** are electrical box adapter plates. Use the **ICS100-AP** to mount an ICS100 Camclosure dome to a standard 4S electrical box. The **ICS300-AP** allows the ICS300 Camclosure to be mounted directly to standard two-gang electrical box.

The **ICS150-P** is a 2 x 2 ft (61 x 61 cm) metal ceiling panel for use with the ICS150 Camclosure integrated camera system. The panel replaces a 2 x 2 ft ceiling tile in a suspended ceiling installation.

The **ICS200-CM** is a corner mount designed for the ICS200 Camclosure integrated camera system. The **ICS200-CM** is the perfect solution for corner mounting the ICS200 Camclosure in a stairwell, hallway, small room, or elevator.

The **ICS300-COND** is a conduit adapter for the ICS300 Camclosure Series. The conduit adapter allows the unit to be installed quickly to any standard conduit fitting.



DataFAX  
SPEC: 22425  
MANUAL: See DataFAX Catalog #2

C2425 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





## ICS100/150 CAMCLOSURE SERIES

### MODELS

ICS100-PG	Pendant mount adapter for the ICS100 Series dome. Must be used with a compatible mount (SWM or IWM Series mount)
ICS100-AP	4-square electrical box adapter plate for the ICS100 Series
ICS150-P	2 x 2 ft (61 x 61 cm) metal ceiling panel for the ICS150 Series

### MECHANICAL

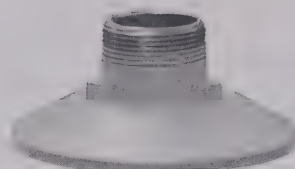
Mounting Method	
ICS100-PG	Attach to the ICS100 with supplied hardware and then mount assembly to a compatible mount (such as the SWM-GY mount, or BB5-PCA-GY and conduit)
ICS100-AP	Attach the adapter plate to a 4S electrical box and then mount the ICS100 to the adapter (hardware supplied)
ICS150-P	Replaces a standard 2 x 2 ft (61 x 61 cm) drop ceiling tile. Install with supplied T-rail clips

### GENERAL

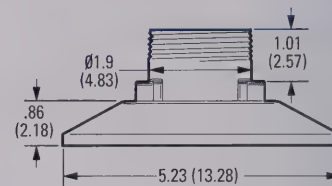
Construction	Aluminum
Finish	Gray polyester powder coat
Unit Weight	
ICS100-PG	0.65 lb (0.29 kg)
ICS100-AP	0.35 lb (0.16 kg)
ICS150-P	4.55 lb (2.06 kg)
Shipping Weight	
ICS100-PG	2 lb (0.91 kg)
ICS100-AP	1 lb (0.45 kg)
ICS150-P	7 lb (3.18 kg)

### CERTIFICATIONS

- UL Listed (ICS100-PG and ICS150-P)
- UL Listed to Canadian safety standards (ICS100-PG and ICS150-P)



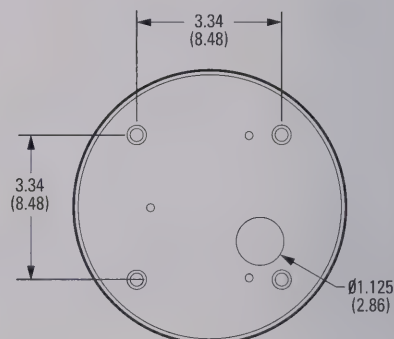
ICS100-PG



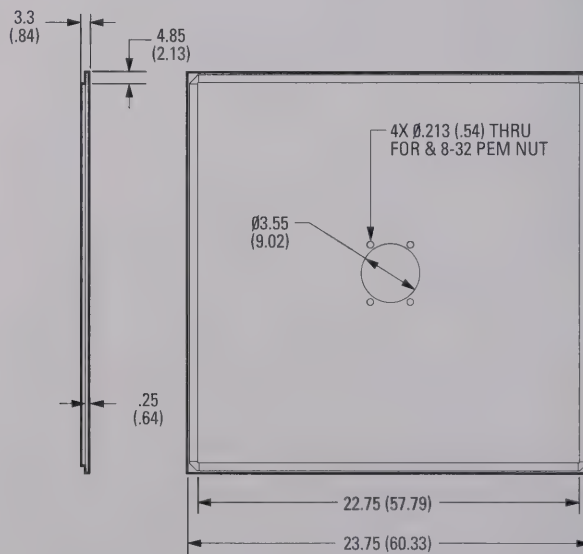
NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



ICS100-AP



ICS150-P



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## ICS200 CAMCLOSURE SERIES

### MODELS

ICS200-CM

Corner mount adapter for the ICS200 Series

### MECHANICAL

Mounting Method

Attach the mount to a mounting surface with appropriate hardware (not supplied) and then attach the ICS200 to the mount (hardware supplied)

### GENERAL

Construction

Aluminum

Finish

Gray polyester powder coat

Unit Weight

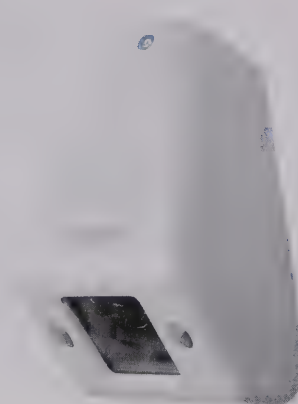
0.70 lb (0.32 kg)

Shipping Weight

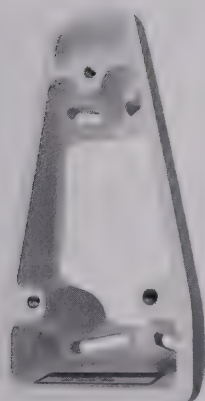
2 lb (0.91 kg)

### CERTIFICATIONS

- UL Listed
- UL Listed to Canadian safety standards



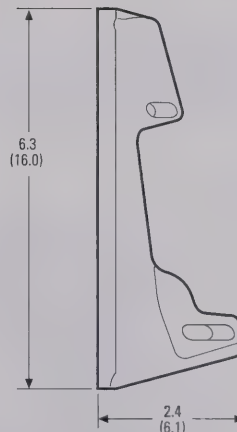
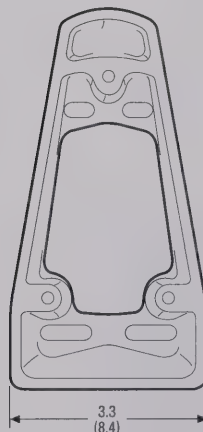
ICS200 SERIES CORNER MOUNTED  
WITH ICS200-CM CORNER MOUNT



ICS200-CM TOP VIEW



ICS200-CM SIDE VIEW



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES

## ICS300 CAMCLOSURE SERIES

### MODELS

ICS300-AP	2-gang electrical box adapter plate for the ICS300 Series
ICS300-COND	Conduit adapter for the ICS300 Series

### MECHANICAL

Mounting Method	
ICS300-AP	Attach the adapter plate to a 2-gang electrical box, and then mount the ICS300 to the adapter (hardware supplied).
ICS300-COND	Attach the conduit adapter to a mounting surface with appropriate hardware (not supplied), and then attach the ICS300 to the conduit adapter with the supplied hardware.

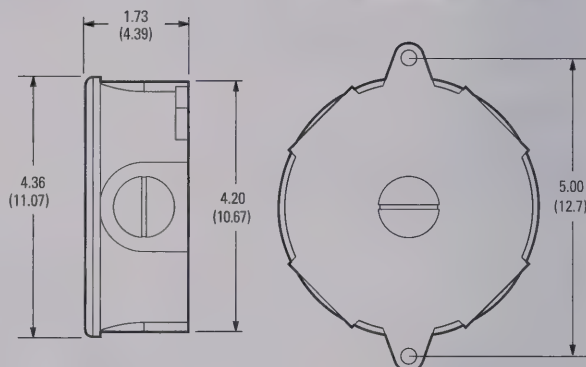
### GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Unit Weight	
ICS300-AP	0.25 lb (0.11 kg)
ICS300-COND	0.75 lb (0.34 kg)
Shipping Weight	
ICS300-AP	1 lb (.45 kg)
ICS300-COND	2 lb (.91 kg)

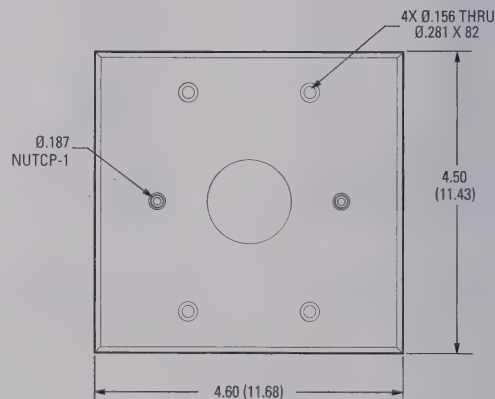
### CERTIFICATIONS

- UL Listed (ICS300-COND)
- UL Listed to Canadian safety standards (ICS300-COND)

ICS300 - COND



ICS300-AP



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



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## IWM Series and IDM4018 Mount

### WALL MOUNT, SPECTRA®, DF5, AND DF8 SERIES DOME

#### Product Features

- For Use with Spectra®, DF5, and DF8 Series Pendant Domes; Can Also Be Used with Other Pendant Domes using 1.5-inch NPT Threaded Pipe for Mounting
- Constructed of Aluminum (IDM4018) and Cast Aluminum (IWM Series)
- Mounts Directly to Vertical Load-Bearing Surface for Wall Mount Applications
- Supports up to 75 Pounds (34 kg)
- Includes Cable Feedthrough Hole
- IWM24 Series Includes Integral 24 VAC, 100 VA Transformer for Use with Spectra Series Domes
- Optional Parapet, Pole, and Corner Adapters Are Available

The **IWM Series** and **IDM4018** wall mounts are designed primarily for use with Spectra®, DF5, and DF8 Series pendant domes. They can also be used with other pendant domes that utilize 1.5-inch NPT pipe for mounting.

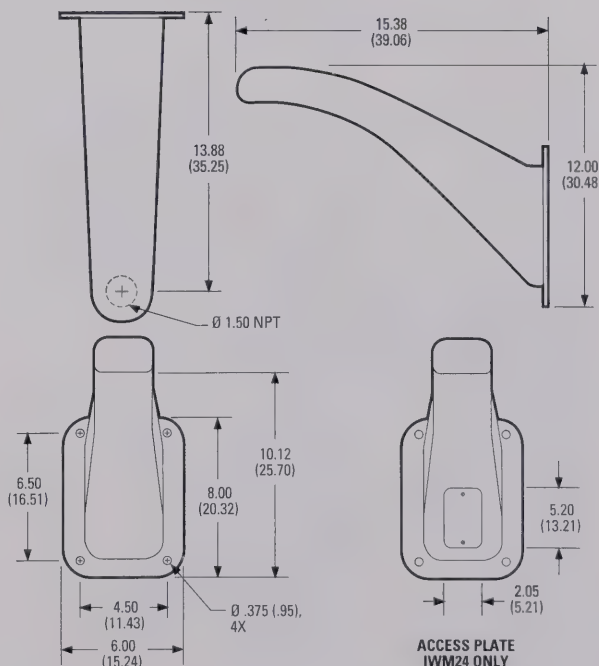
The **IDM4018** is constructed of aluminum and has a gray polyester powder coat finish. The **IWM Series** is constructed of cast aluminum and is available in a black or gray finish. The **IWM Series** is available in black or gray and includes an integral 24 VAC, 100 VA transformer. Input power (120 or 230 VAC, 50/60 Hz) is selectable via an internal slide switch which is easily accessible through a front access cover plate. Input wiring can enter the arm from openings in the mounting plate or flexible metal conduit fittings may be installed on each side of the mount. All mounts are designed to support up to 75 pounds (34 kg).

Both mounts are threaded for 1.5-inch NPT pipe, ready to accept a Spectra, DF5, or DF8 Series pendant back box.

The **IWM Series** and **IDM4018** can be attached directly to any vertical load-bearing surface. Optional parapet, pole, and corner adapters are available.



IWM-GY



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

IWM SERIES DIMENSION DRAWING



DataFAX

SPEC: 2203

MANUAL: 22036 (IDM4018), 22886 (IWM Series)

C203 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

IWM-BK	Wall mount with cable feedthrough for use with Spectra, DF5, and DF8 Series pendant domes; black finish.
IWM-GY	Same as IWM-BK except gray finish.
IWM24-BK	Wall mount with cable feedthrough for use with Spectra, DF5, and DF8 Series pendant domes; includes integral 24 VAC, 100 VA transformer; black finish.
IWM24-GY	Same as IWM24-BK except gray finish.
IDM4018	Wall mount with removable front end cap and feedthrough capabilities for use with Spectra, DF5, and DF8 Series pendant domes.

## ELECTRICAL

### (IWM24 Series Only)

Input Power	120/230 VAC, 50/60 Hz, switchable via an internal slide switch
Output Power	24 VAC, 100 VA transformer
Fuse	One 1.6 A, 120 VAC, fast acting One 500 mA, 230 VAC, fast acting

## GENERAL

### Suggested Mounting Method

IWM Series	Secure with four 3/8-inch fasteners (not supplied) suitable for the mounting surface
IDM4018	Secure with four 5/16-inch fasteners (not supplied) suitable for the mounting surface
Dome Mounting	Dome screws directly into mount

### Cable Entry

IWM Series and IDM4018	One cable feedthrough hole in mounting plate
IWM24 Series	Two cable feedthrough holes in mounting plate; can accommodate 1/2-inch (1.27 cm) conduit fittings or PG13.5 liquid-tight gland fittings. Two 3/4-inch (1.91 cm) conduit openings can be drilled on side of mount arm for flexible metal conduit connectors

Maximum Load 75 lb (34 kg)

### Effective Projected Area (EPA)

IWM Series	~48 square inches
IDM4018	~54 square inches

### Construction

IWM Series	Cast aluminum
IDM4018	5052H32 Aluminum

### Finish

IWM-BK	Black polyester powder coat
IWM-GY	Gray polyester powder coat
IWM24-BK	Black polyester powder coat
IWM24-GY	Gray polyester powder coat
IDM4018	Gray polyester powder coat
Environment	Indoor/outdoor

### Unit Weight

IWM Series	4.72 lb (2.14 kg)
IWM24 Series	7.95 lb (3.61 kg)
IDM4018	4.00 lb (1.81 kg)

### Shipping Weight

IWM Series	7 lb (3.17 kg)
IWM24 Series	11 lb (4.98 kg)
IDM4018	6 lb (2.71 kg)

## CERTIFICATIONS/RATINGS

- CE compliant (IWM24-BK and IWM24-GY only)
- UL Listed (IWM24-BK and IWM24-GY only)
- UL Listed to Canadian safety standards (IWM24-BK and IWM24-GY only)
- Meets NEMA Type 4 Standards (IWM24-BK and IWM24-GY only)

## OPTIONAL MOUNT ADAPTERS

### Corner

CM400

Corner mount adapter; use with IDM4018 and IWM Series

### Pole

PA402

Pole mount adapter; use with IDM4018 and IWM Series

### Parapet

PP300L/PP301L

Parapet corner adapter; use with IWM-GY (Spectra and DF5 pendant domes only)

PP400

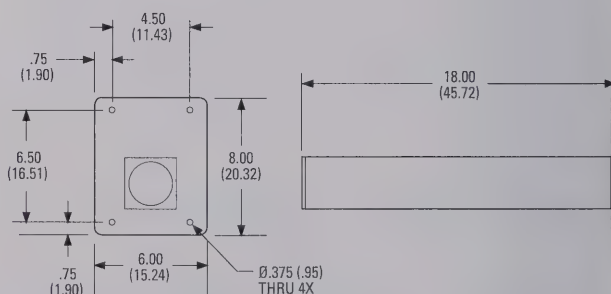
Parapet wall adapter; use with IDM4018 and IWM Series

PP4348

Rooftop parapet adapter; use with IDM4018 and IWM Series



IDM4018



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



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## MRCA/MRWA Mount

### CEILING/WALL MOUNT, DOME OR MONITOR

#### Product Features

- Ceiling or Wall Mounting
- Black Polyester Powder Coat Finish
- For Use with Full-Sphere Pendant Style Domes Utilizing 1.5-Inch NPT Threaded Pipe for Mounting
- Indoor Applications Only
- Can Also Be Used with MR3000, MR3050, MR4050, and MR5000 Series Monitor Mounts

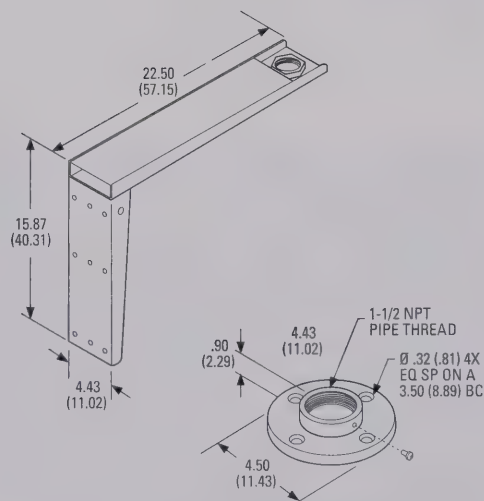


The **MRCA** and **MRWA** mounts are designed for use with full-sphere pendant mount domes that utilize a suitable length of 1.5-inch NPT threaded pipe for mounting.

The **MRCA** is for use in ceiling mount applications and the **MRWA** is for wall mount applications.

The **MRCA** and **MRWA** are compatible with Pelco Spectra®, DF5, and DF8 Series pendant style domes. They can also be used with MR3000, MR3050, MR4050, and MR5000 Series monitor mounts.

The **MRCA** and **MRWA** are constructed of steel and have a black polyester powder coat finish. These mounts are for indoor use only.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX

SPEC: 2234

MANUAL: 22346 (MRCA), 22376 (MRWA)

C234 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

MRCA	Ceiling mount for full-sphere pendant style domes which utilize 1.5-inch NPT threaded pipe for mounting
MRWA	Wall mount for full-sphere pendant style domes which utilize 1.5-inch NPT threaded pipe for mounting

## GENERAL

Dome Mounting	Suitable length of 1.5-inch NPT threaded pipe required (not supplied with mount)
Mounting Method	
MRCA	Four 5/16-inch diameter fasteners, not supplied
MRWA	Minimum of six 5/16-inch diameter fasteners, not supplied
Construction	Steel
Finish	Black polyester powder coat
Unit Weight	
MRCA	1.22 lb (0.55 kg)
MRWA	11.35 lb (5.15 kg)
Shipping Weight	
MRCA	2 lb (0.9 kg)
MRWA	13 lb (5.88 kg)

## CERTIFICATIONS

- UL Listed



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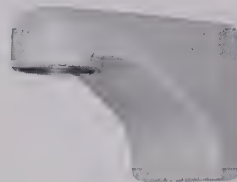


# SWM Series Mount

## CORNER, POLE AND WALL, SPECTRA® AND DF5 SERIES DOMES

### Product Features

- Low Cost
- For Use with Spectra® or DF5 Series Pendant Domes
- Constructed of Cast Aluminum
- Cable Feedthrough Features
- Supports up to 10 pounds (4.5 kg)
- Easy to Install, by means of a Mounting Plate, with Standard Tools
- Mounting Hardware is Concealed Within the SWM, Providing a Very Attractive Appearance
- Mounts Directly to a Vertical Load-Bearing Surface for Wall Mount Applications
- Can be used with the SWM-PA Series Pole Adapter or SWM-CA Series Corner Adapter
- For Indoor or Outdoor Applications



SWM-GY  
WALL MOUNT



SWM-PA-GY  
POLE ADAPTER



SWM-GY  
CORNER ADAPTER

The **SWM Series** wall mount is an indoor or outdoor wall mount for Pelco's pendant domes in the Spectra® and DF5 Series. Its unique design hides the mounting bolts inside the mount, providing a clean and aesthetically pleasing appearance. It is easy to install and requires no special tools. A gasket is affixed to the base to protect the interior from moisture.

A feedthrough opening in the mounting surface allows for easy routing of video and power cables. Because of its compact size, the mount is not suitable for use with conduit fittings. A 1.5-inch NPT pipe thread is provided in the mount to attach the pendant dome.

Accessories for the wall mount include the **SWM-PA Series** pole adapter and the **SWM-CA Series** corner adapter. The corner adapter allows the wall mount to be attached to the corner of a building. The corner adapter is available with or without a 100 VA transformer that converts 120 or 230 VAC input to 24 VAC output to operate the Spectra and DF5 domes.

The wall mount and adapters are constructed of aluminum. The wall mount and pole adapter come in a light gray or black polyester powder coat finish. The corner adapter is available in the gray finish only.



SWM-GY WALL MOUNT AND SWM-CA CORNER ADAPTER  
SHOWN WITH DF5-PG-E0



DataFAX

SPEC: 2293

MANUAL: 22936 (SWM), 22946 (SWM-PA), 22956 (SWM-CA)

C293 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

SWM-BK	Compact wall mount with cable feedthrough, black finish.
SWM-GY	Same as SWM-BK except gray finish

## RELATED PRODUCTS

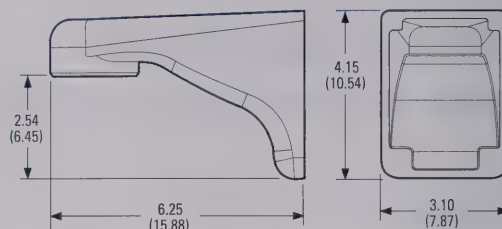
SWM-CA	Corner adapter; gray finish
SWM-CA24	Same as SWM-CA except has internal transformer to convert 120 or 230 VAC input to 24 VAC
SWM-PA-BK	Pole adapter with stainless steel hardware, black finish
SWM-PA-GY	Same as SWM-PA-BK except gray finish

## ELECTRICAL

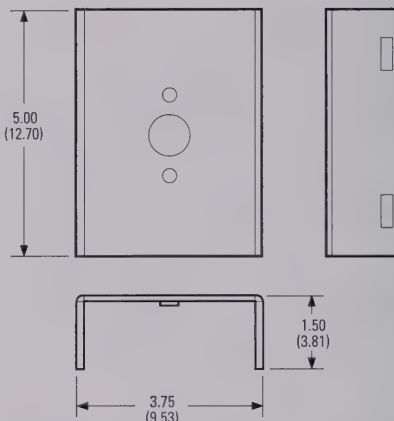
Input Power	120/230 VAC, 50/60 Hz switchable
Output Power	24 VAC (100 VA transformer)
Circuit Protection	One 1.6A, 120 VAC fast-acting fuse or one 500 mA, 230 VAC slow-blow fuse

## GENERAL

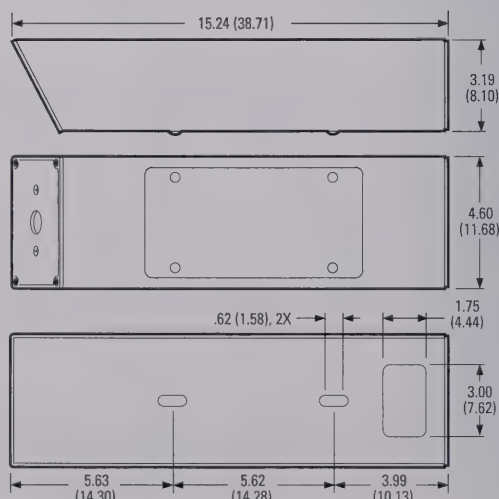
Mounting Method	Wall mount										
Corner adapter	Adapter is attached to a vertical load-bearing surface with two 3/8-inch (0.95 cm) diameter stainless steel bolts of appropriate length (not supplied). Includes hardware to attach SWM mount.										
Pole adapter	Adapter is attached to a pole with two stainless steel straps (supplied). Stainless steel strap length 28.5 inches (72.39 cm); fits poles with a minimum 4-inch (10.16 cm) diameter. (Includes hardware to attach mounting plate.)										
Cable Entry	Via cable feedthrough hole in mount adapters										
Maximum Load	10 lb (4.5 kg)										
Environment	Indoor/outdoor										
Operating Temperature	(SWM-CA24 only) -50° to 120°F (-46° to 49°C)										
Effective Projected Area (EPA)	SWM-BK and SWM-GY ~12 square inches										
Construction	Wall mount Cast aluminum Adapters Aluminum										
Finish	SWM-GY, SWM-CA, SWM-CA24, SWM-PA-GY Gray polyester powder coat SWM-BK, SWM-PA-BK Black polyester powder coat										
Weight	<table> <tr> <th>Unit</th><th>Shipping</th></tr> <tr> <td>SWM-BK, SWM-GY</td><td>1.1 lb (0.50 kg) 2 lb (0.91 kg)</td></tr> <tr> <td>SWM-CA</td><td>3.95 lb (1.79 kg) 5 lb (2.27 kg)</td></tr> <tr> <td>SWM-CA24</td><td>7.32 lb (3.32 kg) 9 lb (4.08 kg)</td></tr> <tr> <td>SWM-PA-BK, SWM-PA-GY</td><td>0.7 lb (0.32 kg) 2 lb (0.91 kg)</td></tr> </table>	Unit	Shipping	SWM-BK, SWM-GY	1.1 lb (0.50 kg) 2 lb (0.91 kg)	SWM-CA	3.95 lb (1.79 kg) 5 lb (2.27 kg)	SWM-CA24	7.32 lb (3.32 kg) 9 lb (4.08 kg)	SWM-PA-BK, SWM-PA-GY	0.7 lb (0.32 kg) 2 lb (0.91 kg)
Unit	Shipping										
SWM-BK, SWM-GY	1.1 lb (0.50 kg) 2 lb (0.91 kg)										
SWM-CA	3.95 lb (1.79 kg) 5 lb (2.27 kg)										
SWM-CA24	7.32 lb (3.32 kg) 9 lb (4.08 kg)										
SWM-PA-BK, SWM-PA-GY	0.7 lb (0.32 kg) 2 lb (0.91 kg)										



**SWM-GY DIMENSION DRAWING**



**SWM-PA-GY POLE ADAPTER DIMENSION DRAWING**



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

**SWM-CA CORNER ADAPTER DIMENSION DRAWING**

Indicates change or addition.



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## PP350/PP351/PP450/PP451 Mount

### PARAPET, WALL/ROOFTOP MOUNT, SPECTRA®, DF5, AND DF8 DOMES

#### Product Features

- Easy to Install
- Aluminum Construction
- Maximum Load 45 Pounds (20.41 kg)
- For Use with Small and Medium Outdoor Pendant Mount Domes that Use 1.5-Inch NPT Pipe (Including Spectra®, DF5, and DF8 Series)
- PP350/PP450 Mounts to Inside or Outside of Parapet Wall; PP351/PP451 Mounts to Rooftop or Smooth Horizontal Surface
- Swivels for Easy Installation and Access to Dome
- Removable End Cap for Easy Access to Wiring

The **PP350** and **PP351** mounts were designed for outdoor use with small-size pendant domes (such as Spectra and DF5 Series), and the **PP450** and **PP451** are for outdoor use with medium-size pendant domes (such as DF8 Series). The **PP350** and **PP450** models mount to parapets, while the **PP351** and **PP451** models mount to rooftops or other smooth horizontal surfaces. All models accommodate domes that use 1.5-inch NPT pipe.

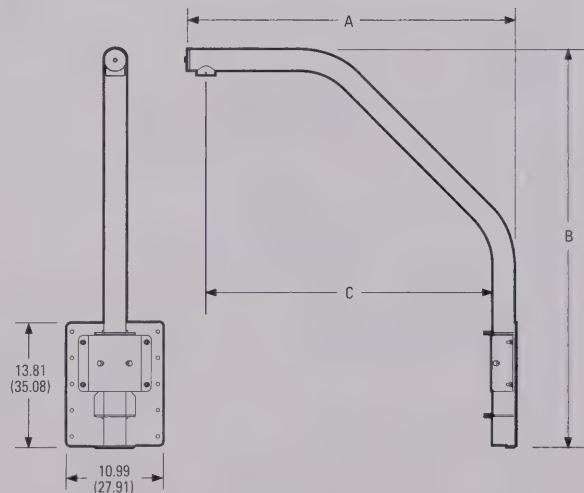
The **PP451** and **PP451** can be used in applications where mounting and height clearances of models **PP451** and **PP451** are inadequate. Models **PP451** and **PP451** are higher by 9.72 inches (24.69 cm) and the overhang is increased by 14.77 inches (37.52 cm).

The mounts are designed to swivel within available clearance limits, which adds to the flexibility, easy maintenance, and usability of the configuration.

Manufactured from aluminum, the mounts include indexing bolts to secure the arm in position.



PP350 PARAPET WALL MOUNT



	A	B	C
PP350	25.50 (64.77)	35.08 (89.10)	20.42 (51.87)
PP450	37.66 (95.65)	42.00 (106.68)	33.00 (83.82)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2212  
MANUAL: 22126

C212 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

PP350	Parapet or vertical wall mount for small-size pendant domes; mounts to inside or outside of parapet
PP351	Rooftop or smooth horizontal surface mount for small-size pendant domes
PP450	Same as PP350 except overhead clearance and height accommodate medium-size pendant domes
PP451	Same as PP351 except overhead clearance and height accommodate medium-size pendant domes

## MECHANICAL

Positioning Adjustment	360°
Mounting Method	Secure to mounting surface with 3/8-16 type fastening hardware (not supplied). Multiple fastening positions facilitate mounting flexibility. For models PP350 and PP450, mount using a minimum of six fasteners For models PP351 and PP451, mount using a minimum of eight fasteners
Dome Mounting	Dome screws directly into mount

## GENERAL

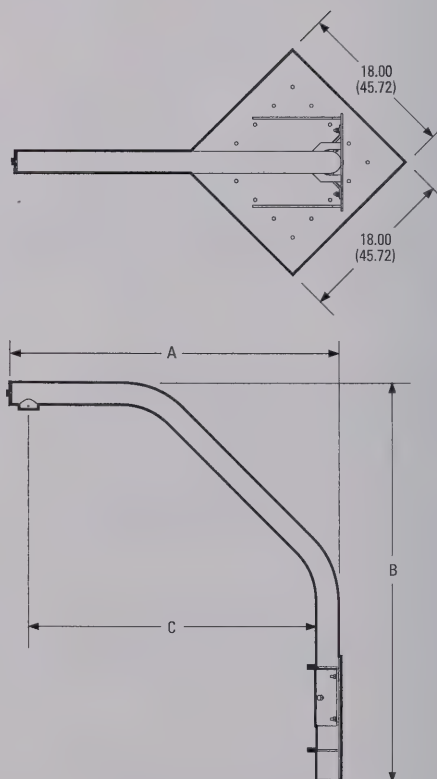
Maximum Load	45 lb (20.41 kg) approximate
Effective Projected Area (EPA)	
PP350/PP351	~133 square inches
PP450/PP451	~177 square inches
Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Outdoor
Unit Weight	
PP350	9.30 lb (4.22 kg)
PP351	20.19 lb (9.16 kg)
PP450	10.38 lb (4.71 kg)
PP451	22.53 lb (10.22 kg)
Shipping Weight	
PP350	15 lb (6.80 kg)
PP351	33 lb (14.95 kg)
PP450	17 lb (7.70 kg)
PP451	35 lb (15.85 kg)

## CERTIFICATIONS/RATINGS

- UL Listed (models PP350 and PP351)



PP351 PARAPET ROOFTOP MOUNT



	A		B		C	
PP351	25.50	(64.77)	35.27	(89.59)	20.42	(51.87)
PP451	37.66	(95.65)	42.19	(107.16)	33.00	(83.82)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



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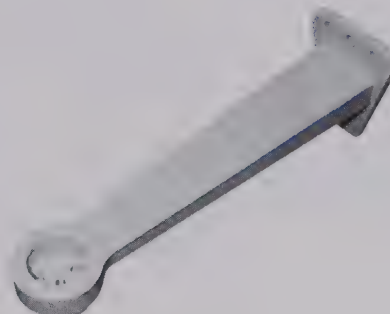


# PM14 Mount

## WALL MOUNT, LIGHT DUTY, PAN/TILT

### Product Features

- Low Cost Wall Mount
- Decorator Styling
- Supports up to 20 Pounds (9.07 kg)
- Accommodates Light Duty Pan/Tilts
- Can Be Adapted for Pole Applications With Use of PA101 Adapter

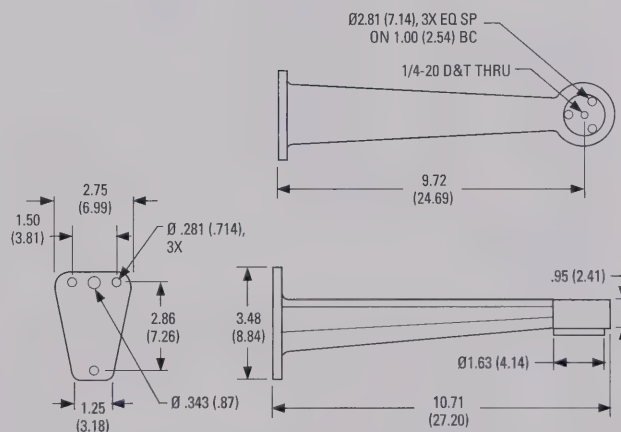


The **PM14** is a light duty pan/tilt mount designed for wall mount applications.

The **PM14** is manufactured from aluminum and die-cast for low cost efficiency. The **PM14** will support up to 20 pounds (9.07 kg).

The mount can be used with our PT270/PT280 Series pan/tilts.

The **PM14** can also be adapted for pole mount applications when used with the PA101 mount adapter.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2215  
MANUAL: 22156

C215 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001





## MODEL

PM14

Light duty wall mount for PT270P, PT270-24P, and PT280-24P pan/tilts or light-weight enclosures

## RELATED PRODUCTS

PA101

Pole mount adapter for PM14 mount.  
Minimum pole diameter 3 inches (7.62 cm).  
Stainless steel straps supplied. Strap length 28.5 inches (72.39 cm)

## MECHANICAL

Pan/Tilt Mounting  
PT270/PT280

Mounting Method

Three 1/4-20 x 1.25 cap screws (supplied)  
Secure to solid surface with three 1/4-inch diameter fasteners or use two fasteners (one 1/4-inch diameter and one 5/16-inch diameter) for center mounting holes in applications where wall studs are encountered. (Fasteners not supplied)

## GENERAL

Construction  
Finish

Die-cast aluminum  
Gray polyester powder coat

Suggested  
Maximum Load

20 lb (9.07 kg)

Unit Weight

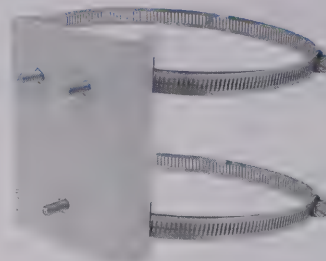
1 lb (0.45 kg)  
PA101  
0.88 lb (0.40 kg)

Shipping Weight

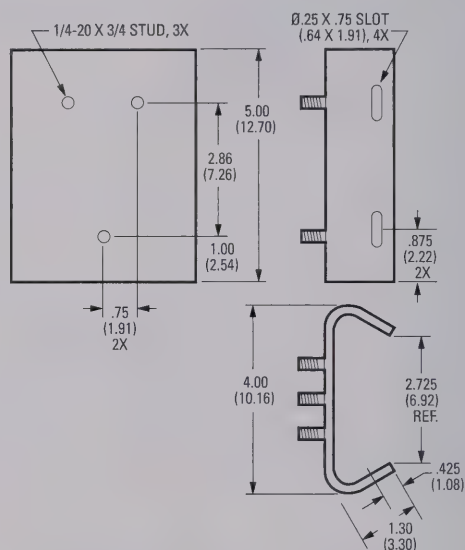
PM14  
2 lb (0.90 kg)  
PA101  
2 lb (0.90 kg)

## CERTIFICATIONS

- UL Listed



PA101 POLE ADAPTER MOUNT



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PA101 DIMENSION DRAWING

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# PM105 Mount

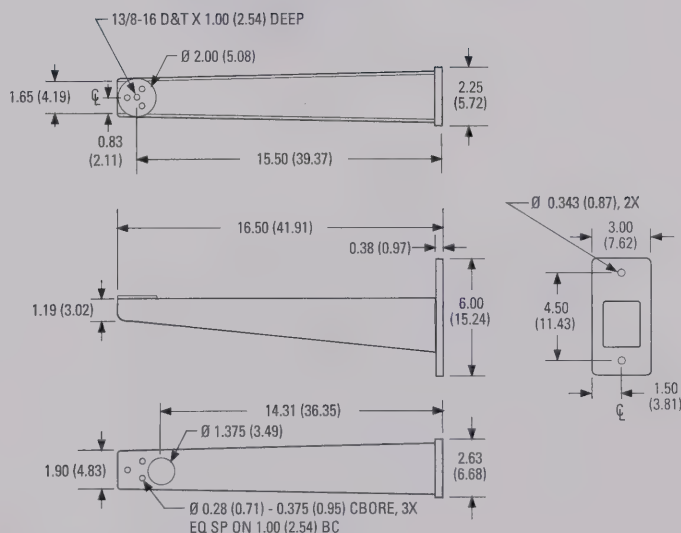
## WALL MOUNT, LIGHT-DUTY, PAN/TILT

### Product Features

- Low Cost
- Rugged Construction
- Wall Mounting
- Fast, Simple Installation
- Supports up to 40 Pounds (18.14 kg)
- Accommodates Lightweight Pan/Tilts

The **PM105** is a medium-duty wall mount designed for mounting lightweight pan/tilts and is capable of handling loads up to 40 pounds (18.14 kg). The **PM105** can be used with the PT270P, PT270-24P, and PT280-24P pan/tilts.

The **PM105** is easy to install and mounts to any wall or vertical surface.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 2210  
MANUAL: 22106 (PM105)

C210 / REVISED 10-02



International Organization  
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## MODEL

PM105

Medium duty wall mount for PT270P, PT270-24P, and PT280-24P pan/tilts; supports up to 40 lb (18.14 kg).

## MECHANICAL

Positioning Adjustment  
Pan/Tilt Mounting

Fixed  
Secure with three 1/4-20 x 1.00" fasteners (provided)

## GENERAL

Construction  
Finish  
Maximum Load  
Unit Weight  
Shipping Weight

Cast aluminum  
Gray polyester powder coat  
40 lb (18 kg)  
2.40 lb (1.09 kg)  
3 lb (1.36 kg)

## CERTIFICATIONS

- UL Listed



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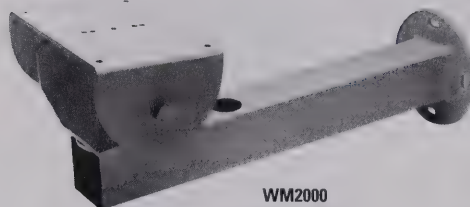


## WM2000 Mount

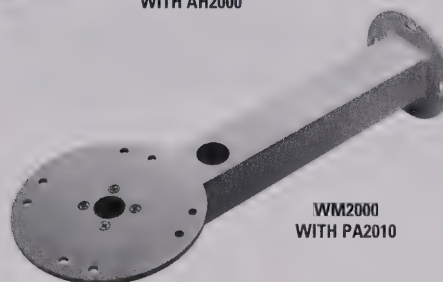
### WALL MOUNT, HEAVY DUTY, ENCLOSURE AND PAN/TILT

#### Product Features

- Wall Mounting
- Can Also Be Used in Corner, Pole, and Parapet Applications When Used with Appropriate Mount Adapter
- Supports up to 75 Pounds (34 kg); 150 Pounds (68 kg) When Used with ST1 Strut
- For use with Medium- and Heavy-Duty Pan/Tilts or Enclosures
- Cable Feedthrough Holes (Top and End of Arm); Removable Plastic Cap on Front End



WM2000  
WITH AH2000



WM2000  
WITH PA2010

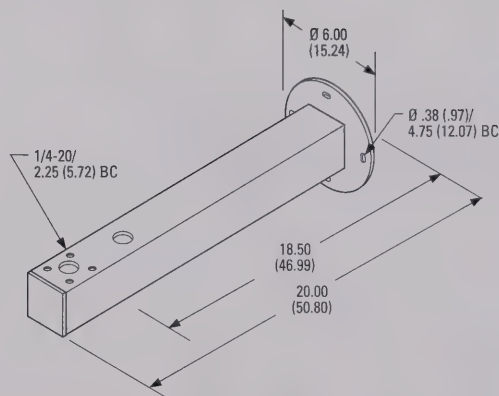
The **WM2000** is a universal wall mount designed for use with medium- and heavy-duty pan/tilts or enclosures. Constructed from aluminum, the **WM2000** will safely support up to 75 pounds (34 kg). When used with the ST1 support strut, the maximum load is increased to 150 pounds (68 kg). Optional mount adapters are available for corner, pole, and parapet applications.

The **WM2000** can be adapted for use with enclosures when used with the AH1000 or AH2000 adjustable head. The AH1000 and AH2000 allow 360-degree positioning of the enclosure; the AH1000 is for use with EH4700 Series enclosures, and the AH2000 is for use with EH5700, EH8106, and EHX\*E Series enclosures.

In certain applications, the AH1000 or AH2000 can be utilized alone.

When mounting a pan/tilt on the WM2000, the appropriate adapter (PA2000/PA2010) must be used (*see Related Products*).

Adapters are available for corner (CM100), pole (PA102), and parapet (PP100) applications (*see Optional Adapters*).



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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WM2000 DIMENSION DRAWING



DataFAX  
SPEC: 2266  
MANUAL: 22576

C266 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## WM2000 and Related Products

### MODEL

WM2000 Universal wall mount for pan/tilts and enclosures

### RELATED PRODUCTS

AH1000 Manually adjustable pan/tilt head for use with EH4700 Series enclosures  
 AH2000 Manually adjustable pan/tilt head for use with EH5700, EH8106, and EHX\*E Series enclosures  
 PA2000 Mount adapter for PT520P, PT520SL, PT570P, PT570-24P, and PT680-24P pan/tilts  
 PA2010 Mount adapter for PT1250DC, PT1250P, PT1280P, PT1280SL, and PT1260EX heavy duty pan/tilts  
 ST1 Support strut; for use with WM2000. Increases maximum load to 150 lb (68 kg)

### OPTIONAL ADAPTERS

CM100 Corner mount adapter for WM2000 mount  
 PA102 Pole mount adapter for WM2000 mount  
 PP100 Parapet mount for WM2000 mount  
 SCM100 Corner mount adapter for ST1 strut  
 SPA102 Pole mount adapter for ST1 strut

### MECHANICAL

Pan Adjustment 360° (models AH1000 and AH2000 only)  
 Tilt Adjustment ±90° (models AH1000 and AH2000 only)  
 Mounting Method Secure to a solid surface with fasteners of a suitable size (not supplied)

### GENERAL

#### Effective Projected Area (EPA)

WM2000 ~60 square inches  
 AH1000 ~21 square inches  
 AH2000 ~7 square inches  
 ST1 ~30 square inches

#### Construction

Aluminum

#### Finish

Gray polyester powder coat

#### Maximum Load

75 lb (34 kg); 150 lb (68 kg) when used with ST1 strut

#### Unit Weight

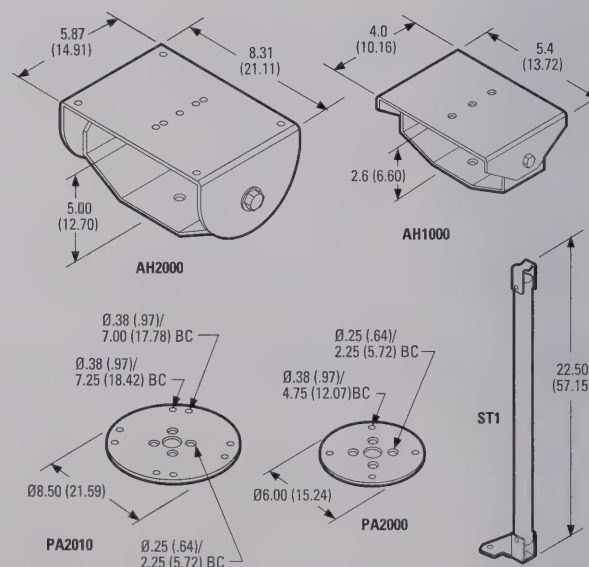
AH1000 0.88 lb (0.40 kg)  
 AH2000 2.92 lb (1.32 kg)  
 PA2000 0.63 lb (0.28 kg)  
 PA2010 1.28 lb (0.58 kg)  
 ST1 1.34 lb (0.61 kg)  
 WM2000 3.07 lb (1.39 kg)

#### Shipping Weight

AH1000 2 lb (0.90 kg)  
 AH2000 4 lb (1.81 kg)  
 PA2000 1 lb (0.45 kg)  
 PA2010 2 lb (0.90 kg)  
 ST1 3 lb (1.35 kg)  
 WM2000 5 lb (2.26 kg)

### CERTIFICATIONS

- UL Listed



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

## Corner Adapters

### MODELS

CM100	Corner mount adapter for WM2000 wall mount
SCM100	Corner mount adapter for ST1 support strut

### MECHANICAL

#### Adapter Mounting

Four 5/16-inch studs provided for mounting the WM2000 to CM100 (nuts and split lock washers supplied). Three 5/16-inch studs provided for mounting ST1 strut to the SCM100 (nuts and split lock washers supplied).

#### Suggested Mounting Method

Secure to solid mounting surface with fasteners of a suitable size. (Fasteners are not supplied.)  
Eight required  
Four required

CM100	
SCM100	
Maximum Load	
CM100	75 lb (34 kg)
CM100 with SCM100	150 lb (68 kg)

### GENERAL

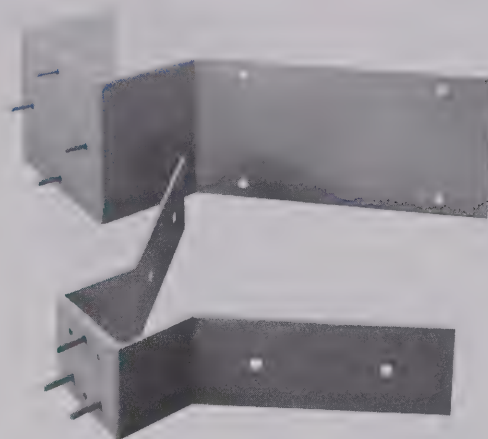
Construction	0.125-inch (3.17 mm) thick, 5052H32 aluminum
Finish	Gray polyester powder coat

Unit Weight	
CM100	3 lb (1.4 kg)
SCM100	1.5 lb (0.6 kg)

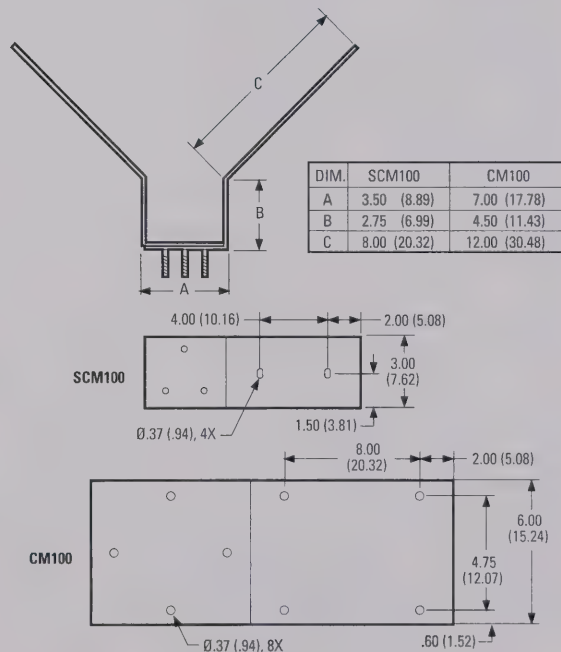
Shipping Weight	
CM100	5 lb (2.3 kg)
SCM100	2 lb (0.9 kg)

### CERTIFICATIONS

- UL Listed



CM100 (TOP) AND SCM 100 (BOTTOM)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



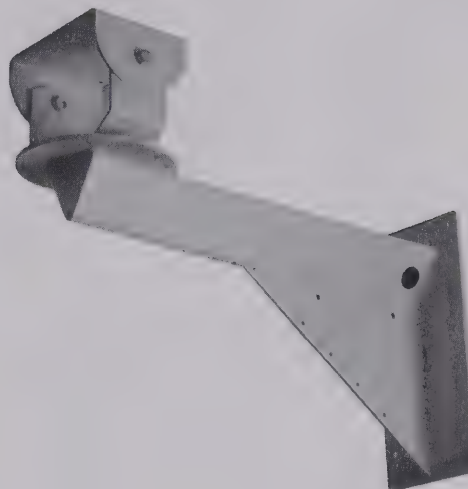


## WM3026 Mount

### WALL MOUNT, EXTRA HEAVY DUTY, PAN/TILT AND ENCLOSURE

#### Product Features

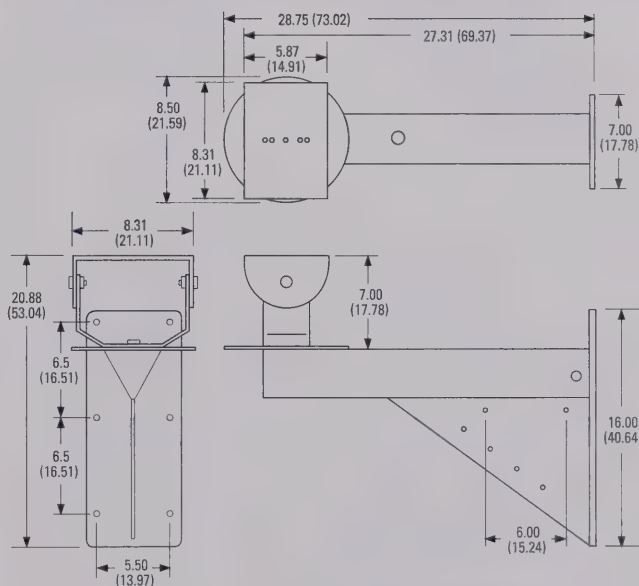
- Aluminum Construction
- Maximum Load 300 Pounds (136.08 kg)
- For Use with Heavy Duty Pan/Tilts and Enclosures
- Built-in Gusset Provides Added Support and Ample Space for Mounting an External Receiver
- Two 3/4-Inch NPT Threaded Holes on Side of Mount Arm Accommodate Flexible Metal Conduit Connectors
- Adjustable Head Easily Removed for Use with Heavy Duty Pan/Tilt – No Special Adapters Required



The **WM3026** wall mount has been designed specifically for use with Pelco's heavy duty pan/tilts and/or enclosures. Manufactured from 0.25-inch (6.35 mm) aluminum, the **WM3026** is capable of supporting a maximum load of 300 pounds (136.08 kg) and can be safely mounted to any vertical load-bearing surface.

The **WM3026** includes an adjustable mounting head, built-in pan/tilt adapter and gusset for added support. This flexible design allows you to simply remove the adjustable head for heavy duty pan/tilt applications – no special mounting adapters are required. In addition, the gusset can be utilized for mounting a standard receiver in close proximity to the camera, enclosure, and/or pan/tilt.

In addition, the two 3/4-inch NPT threaded holes on the sides of the mount arm will accommodate flexible metal conduit in applications where cabling must be installed externally to the mounting surface.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 2258  
MANUAL: 22586

C258 / REVISED 11-98

International Organization  
for Standardization  
Registered ISO 9001



## MODEL

WM3026

Extra heavy duty wall mount for use with pan/tilts and/or enclosures

## MECHANICAL

Pan Adjustment

360°

Tilt Adjustment

±90°

Cable Entry

One cable entry hole on top of mount arm; two 3/4-inch NPT threaded holes (one on each side) for conduit. Cable may also enter the mounting arm directly through cutout on mounting plate. Three hole plugs provided to cover unused holes.

Suggested

Mounting Method

Secure to wall with six 3/8-inch diameter fasteners of suitable size (not supplied)

## GENERAL

Maximum Load

300 lb (136.08 kg)

Construction

0.25-inch (6.35 mm) aluminum

Finish

Gray polyester powder coat

Environment

Indoor/outdoor

Unit Weight

15.6 lb (7.1 kg)

Shipping Weight

23 lb (10.42 kg)

## COMPATIBLE RECEIVERS

The following standard receivers (indoor or outdoor models) can be mounted to the WM3026:

CX9024RX Series

CX9115RX Series

CX9220RX Series

CX9224RX Series

ERD97P21-U

Indicates change or addition.



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## PM2000/PM2010 Mount

### CEILING/PEDESTAL MOUNT, HEAVY DUTY, PAN/TILT AND ENCLOSURE

#### Product Features

- Ceiling/Pedestal Mounting
- Supports up to 125 Pounds (56.62 kg)
- For Use with Medium- and Heavy-Duty Pan/Tilts
- Optional Adapter Available for Use with Enclosures
- Optional Support Struts Available for Use in High Wind Applications
- Cable Feedthrough Holes (Top and Bottom)

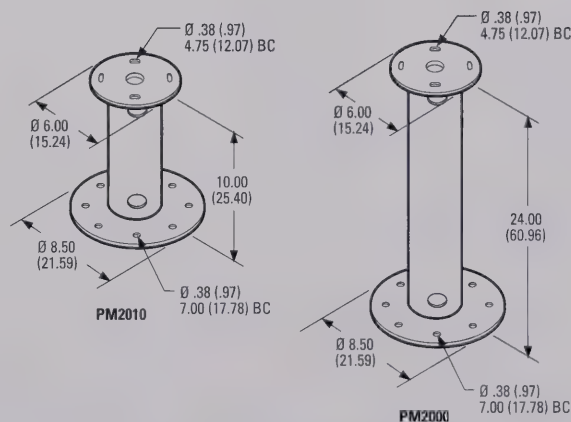
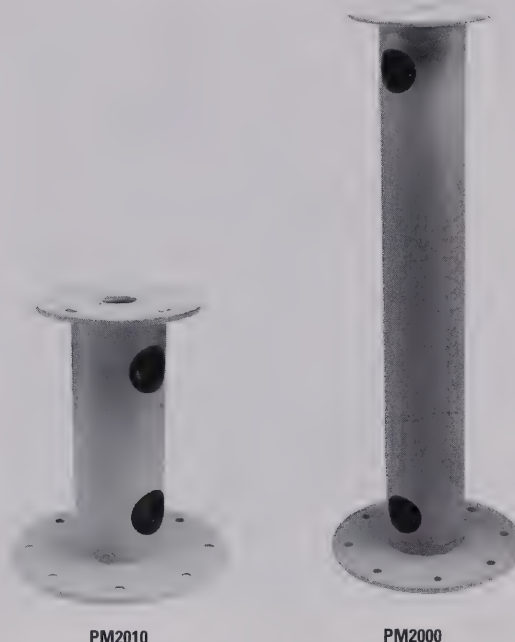
The **PM2000/PM2010** are universal pedestal mounts designed for use with medium- and heavy-duty pan/tilts, including Legacy® and Esprit® integrated positioning systems. The **PM2000/PM2010** are also compatible with PS20 Series scanners. Constructed from aluminum, these mounts will safely support up to 125 pounds (56.62 kg). Optional adapters are available for various pan/tilt and enclosure applications.

The **PM2000** height is 24 inches (60.96 cm), and the **PM2010** height is 10 inches (25.40 cm). The use of two or more ST1 support struts greatly increases horizontal stability in high wind installations.

The **PM2000/PM2010** can also be adapted for use with enclosures when used with the AH1000 or AH2000 adjustable head. The AH1000 and AH2000 allow 360-degree positioning of the enclosure; the AH1000 is for use with EH3512/EH4700 Series enclosures, and the AH2000 is for use with EH5700, EH8106, and EHX\*E Series enclosures.

In certain applications, the AH1000 or AH2000 can be utilized alone.

When mounting a Legacy integrated positioning system on the **PM2000** or **PM2010**, the PA2000 adapter must also be used. No adapter is required when using the Esprit integrated positioning system with factory-supplied EPP pedestal adapter plate.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 2255  
MANUAL: 22566

C255 / REVISED 10-02



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## MODELS

PM2000	Ceiling/pedestal mount, 24-inch (60.96 cm) height.
PM2010	Ceiling/pedestal mount, 10-inch (25.40 cm) height.

## RELATED PRODUCTS

AH1000	Manually adjustable pan/tilt head for use with EH3512/EH4700 Series enclosures on PM2000/PM2010 mounts.
AH2000	Manually adjustable pan/tilt head for use with EH5700, EH8106, and EHX*E Series enclosures on PM2000/PM2010.
PA2000	Mount adapter; required for use with Legacy® integrated positioning systems.
ST1	Support strut; for use with PM2000 in high wind applications.

## MECHANICAL

Pan Adjustment	360° (models AH1000 and AH2000 only)
Tilt Adjustment	±90° (models AH1000 and AH2000 only)
Mounting Method	Secure to a solid surface with fasteners of a suitable size (not supplied)

## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Maximum Load	
PM2000/PM2010	125 lb (56.62 kg)
Unit Weight	
AH1000	0.88 lb (0.40 kg)
AH2000	2.92 lb (1.32 kg)
PA2000	0.63 lb (0.28 kg)
PM2000	4.19 lb (1.90 kg)
PM2010	2.88 lb (1.31 kg)
ST1	1.34 lb (0.61 kg)
Shipping Weight	
AH1000	2 lb (0.9 kg)
AH2000	4 lb (1.81 kg)
PA2000	1 lb (0.45 kg)
PM2000	6 lb (2.71 kg)
PM2010	5 lb (2.27 kg)
ST1	3 lb (1.35 kg)

## CERTIFICATIONS

- UL Listed



AH1000

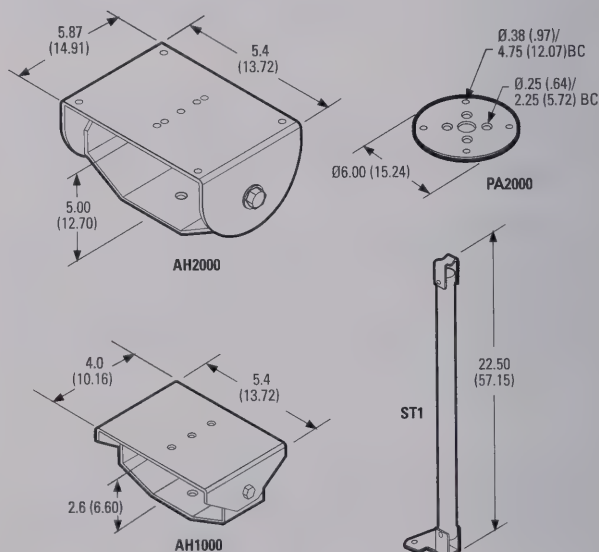
AH2000



PA2000



ST1



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## PP100 Mount

### PARAPET MOUNT, ESPRIT®, PS20, AND WM2000 ADAPTER

#### Product Features

- Rugged Construction
- Unique 360° Positioning
- Fast, Simple Installation
- Feedthrough Wiring
- Supports up to 75 Pounds (34 kg)
- Parapet Adapter for the EWM (Esprit®), PSWM (PS20 Scanner), and WM2000 Wall Mounts
- Mounts to Inside of Parapet
- Safety-Engineered to Eliminate Hazardous Installation and Servicing



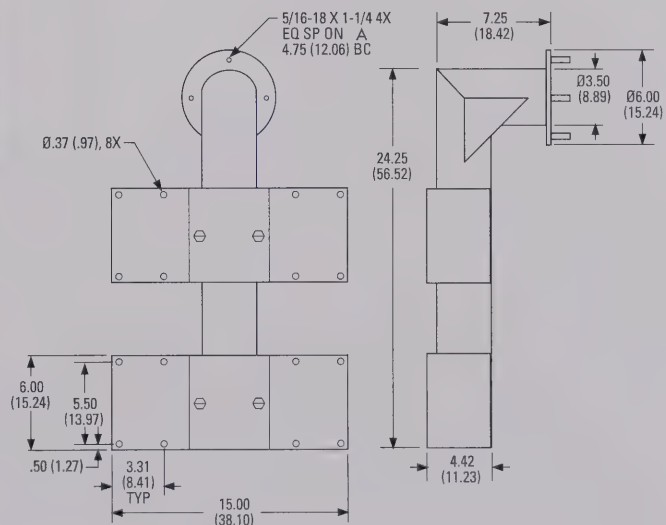
PP100 SHOWN WITH ENCLOSURE AND PAN/TILT MOUNTED ON WM2000 MOUNT

The **PP100** is designed for use with our EWM (Esprit®), PSWM (PS20 Scanner) and WM2000 wall mounts. When used with the appropriate wall mount, you can mount an enclosure, pan/tilt, Esprit positioning system, or PS20 Series scanner to the inside of a parapet.

The **PP100** enables you to safely install and service equipment on rooftops. The mount can be rotated a full 360 degrees by simply loosening the U-bolts securing the tube assembly. Because of its versatile design, it can be positioned anywhere on the parapet, including corners.

The **PP100**, sturdy enough to support a maximum load of 75 pounds (34 kg), is equipped with mounting studs for easy attachment of the mount and has a 3.5-inch diameter feedthrough hole.

The **PP100** is versatile in that it can be used on any parapet with a minimum height of 18 inches (45.72 cm).



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DataFAX  
SPEC: 2245  
MANUAL: 22456

C245 / REVISED 10-02



International Organization  
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Registered ISO 9001



MOUNTS AND ADAPTERS  
P/T, ENCLOSURE



## MODEL

PP100

Parapet adapter mount for use with EWM (Esprit), PSWM (PS20 Scanner), and WM2000 wall mounts. Positions equipment anywhere on parapet, including corners. Minimum parapet height 18 inches (45.72 cm).

## RELATED PRODUCTS

EWM  
PSWM  
WM2000

Wall mount for Esprit positioning system  
Wall mount for PS20 Series scanner  
Wall mount for pan/tilt or enclosure.  
(Requires PA2000/PA2010 adapter for pan/tilt or AH1000/AH2000 adapter for enclosure.  
See WM2000 specification sheet for details.)

## MECHANICAL

Positioning Adjustment  
Adapter Mounting

Unlimited 360°  
Four 5/16-inch mounting studs (nuts and split lock washers provided)

Suggested  
Mounting Method

Secure to parapet with sixteen fasteners of a suitable size (not included). Suggested minimum size 1/4-inch diameter

## GENERAL

Maximum Load  
Construction  
Finish  
Weight  
Shipping Weight

75 lb (34 kg)  
Aluminum  
Gray polyester powder coat  
10 lb (4.50 kg)  
13 lb (5.85 kg)

## CERTIFICATIONS

- UL Listed



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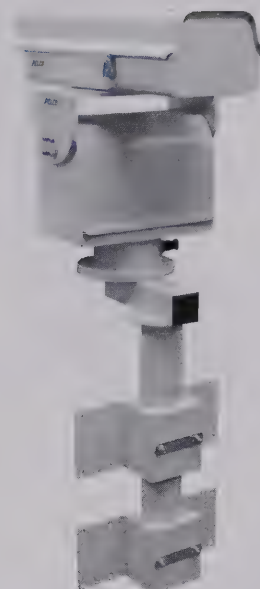
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## PP200 Mount

### PARAPET MOUNT, LARGE PAN/TILT

#### Product Features

- Low Cost
- Aluminum Construction
- Supports up to 175 Pounds (78.75 kg)
- For Use with Pan/Tilt and Environmental Enclosure
- Built-in Pan/Tilt Mounting Arm; Requires Pan/Tilt Adapter
- Mounts to Inside of Parapet; Minimum Parapet Height 18 Inches (45.72 cm)

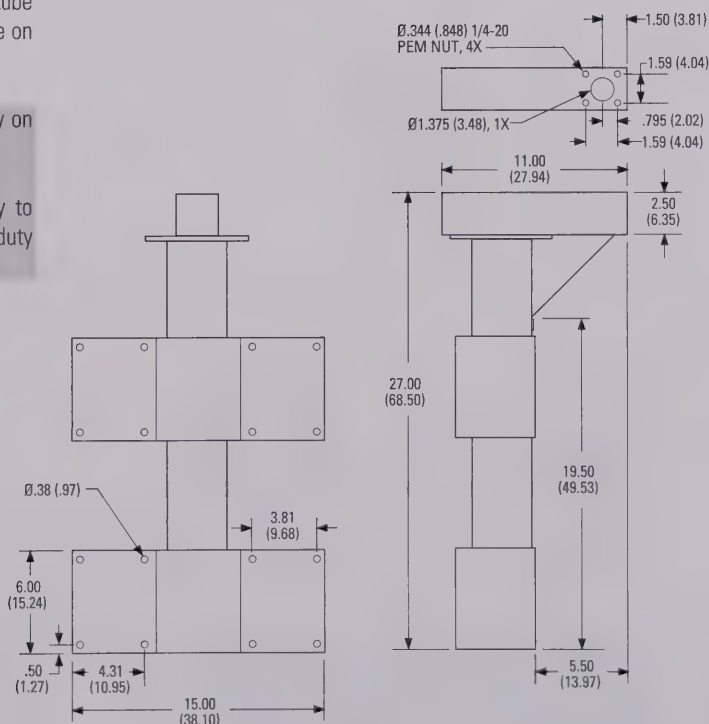


The **PP200** parapet mount is designed to mount a pan/tilt with environmental enclosure (such as our PT1250P and EH5723-1) to the inside of a parapet.

The **PP200** mounts on the inside of the parapet and can be rotated a full 360 degrees by simply loosening the U-bolts securing the tube assembly. Its unique design allows it to be positioned anywhere on the parapet, including corners.

The **PP200** enables you to install and service equipment safely on rooftops.

Because the pan/tilt mounting arm is built-in, you need only to purchase the appropriate pan/tilt adapter (PA2000 for medium-duty pan/tilts or PA2010 for heavy-duty pan/tilts).



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DataFAX  
SPEC: 2247  
MANUAL: 22476

C247 / REVISED 10-02

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for Standardization  
Registered ISO 9001



## MODEL

PP200

Parapet mount for pan/tilt with environmental enclosure; minimum parapet height 18 inches (45.72 cm)

## RELATED PRODUCTS

PA2000

Mount adapter for PT570P, PT570-24P, and PT680-24P medium-duty pan/tilts

PA2010

Mount adapter for PT1250DC, PT1250P, PT1280P, PT1280SL and PT1260EX heavy-duty pan/tilts

## MECHANICAL

Positioning Adjustment

360°

## GENERAL

Construction

Aluminum

Finish

Gray polyester powder coat

Maximum Load

175 lb (78.75 kg)

Mounting Method

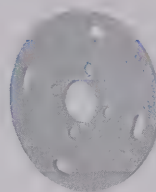
Secure to parapet with sixteen fasteners. (Suggested minimum 3/8-inch diameter, not supplied.)

Unit Weight

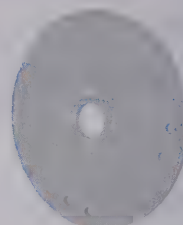
11.73 lb (5.32 kg)

Shipping Weight

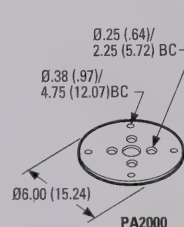
15 lb (6.80 kg)



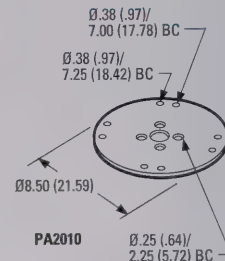
PA2000



PA2010



PA2000



PA2010

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## PA2000 AND PA2010 DIMENSION DRAWINGS



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## Esprit® Series Mounts

### CORNER, PEDESTAL, POLE, AND WALL

#### Product Features

- Low Cost
- For Use with Esprit® Series Integrated Positioning Systems in Corner, Pedestal, Pole, and Wall Applications
- Can Also Be Used in Parapet Applications When Used with Appropriate Mount Adapter
- Constructed of Aluminum
- Features Cable Feedthrough
- Easy to Install
- For Indoor or Outdoor Applications

The **Esprit® Series** mounts include the EWM wall mount, EPM pole mount, ECM100 corner mount, EPP pedestal adapter, and the EA4348 EWM-to-Legacy® adapter.

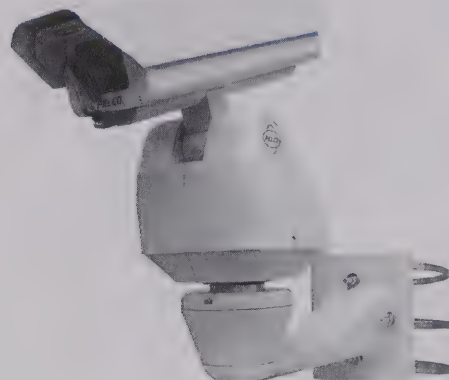
All mounts are aluminum and feature a feedthrough opening to conceal electrical cables. They have a gray, polyester powder coat finish.

The EWM wall mount is the essential component in this series. It can be used as a stand-alone mount for wall applications or in conjunction with the EPM pole mount, ECM100 corner mount, or PP100 parapet mount. When used with the EA4348 adapter, the EWM can also be mounted to a Legacy PP300L, PP301L, or PP4348 parapet mount.

The EWM wall mount is easy to install and requires no special tools. The Esprit integrated positioning system attaches directly to the EWM with three stainless-steel screws and washers. The mount can be attached to any vertical load-bearing surface with four fasteners suitable for the mounting surface (not supplied). Stainless-steel nuts and washers are supplied for attaching the EWM to the mounting studs on the pole, corner, and parapet mounts.

The EPP pedestal adapter is designed to adapt an Esprit integrated positioning system to pedestal mounts, such as the PM2000 or PM2010. Three stainless-steel nuts and washers are provided to secure the Esprit system to the adapter.

The EA4348 EWM-to-Legacy adapter can also be used to retrofit corner-, pole-, and parapet-mounted Legacy systems with Esprit integrated positioning systems. The EA4348 will make any CM400, PA402, PP400, PP300L/PP301L, and PP4348 Legacy mount compatible with the EWM wall mount.



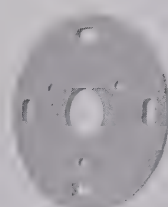
ESPRIT SYSTEM MOUNTED ON EWM WALL MOUNT  
WITH EPM POLE ADAPTER



EWM WALL MOUNT



EPM POLE ADAPTER



EPP PEDESTAL ADAPTER



EA4348 LEGACY  
ADAPTER



ECM100 CORNER ADAPTER



DataFAX

SPEC: 2238

MANUAL: 22256 (ECM100, EPM, EPP, EWM), 22796 (EA4348)

C238 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

ECM100	Esprit corner mount; for use with EWM wall mount
EPP	Esprit pedestal adapter; for use with PM2000/PM2010 pedestal mount
EPM	Esprit pole adapter; for use with EWM wall mount
EWM	Esprit wall mount
EA4348	EWM-to-Legacy adapter; for use with PP300L, PP301L, and PP4348 parapet mounts

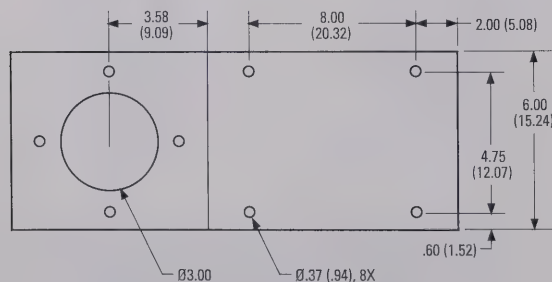
## GENERAL

Construction	Aluminum
Finish	Gray polyester powder coat
Mounting Method	Attached to mounting surface with eight fasteners (not supplied)
ECM100	Attached to a compatible mount (such as the PM2000/PM2010) with four fasteners (not supplied)
EPP	Attached to a pole with three stainless-steel straps (supplied). Strap length 28.5 inches (77.38 cm)
EPM	Attached to the mounting surface with four fasteners (not supplied)
EWM	Attached to Legacy corner, pole, or parapet mount with four fasteners (nuts and split lock washers supplied with Legacy mount)
EA4348	Cable feeds through the EWM mount into the Esprit system; ECM100, EPA, and EPM mounts have a cable feedthrough hole in center

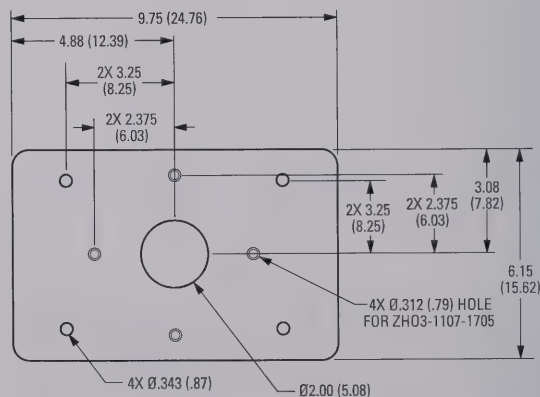
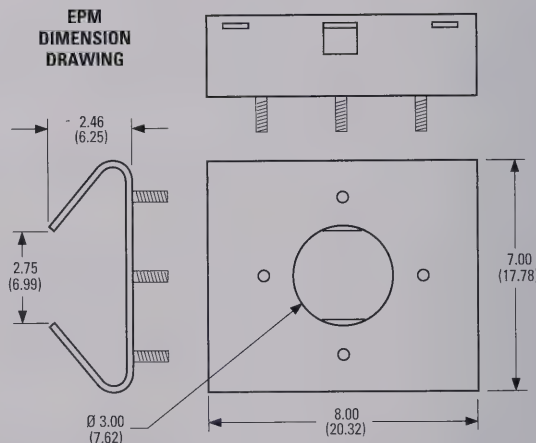
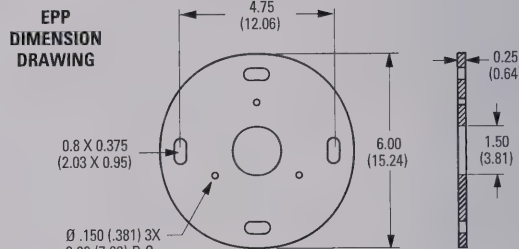
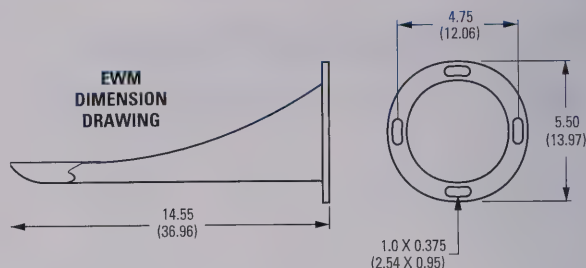
Maximum Load	Not applicable
EPP	75 pounds (34 kg)
ECM100	100 pounds (45 kg)
EPM	30 pounds (14 kg)
EWM	30 pounds (14 kg)
EWM with EA4348	30 pounds (14 kg)
Weight	Unit Shipping
EPP	0.6 lb (0.3 kg) 1.0 lb (0.45 kg)
ECM100	3.0 lb (1.4 kg) 6.0 lb (2.7 kg)
EPM	2.2 lb (1.0 kg) 4.0 lb (1.8 kg)
EWM	2.7 lb (1.2 kg) 3.0 lb (1.4 kg)
EA4348	1.2 lb (0.5 kg) 3.0 lb (1.4 kg)

## OPTIONAL MOUNT ADAPTERS

PP100	Parapet (wall) mount. Use with EWM wall mount
PP300L, PP301L	Parapet (corner) mount. Use with EWM wall mount and EA4348 adapter
PP4348	Parapet (rooftop) mount. Use with EWM wall mount and EA4348 adapter



ECM100 DIMENSION DRAWING



EA4348 DIMENSION DRAWING

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## LWM41 Mount

### WALL MOUNT, LEGACY® SERIES, PAN/TILT

#### Product Features

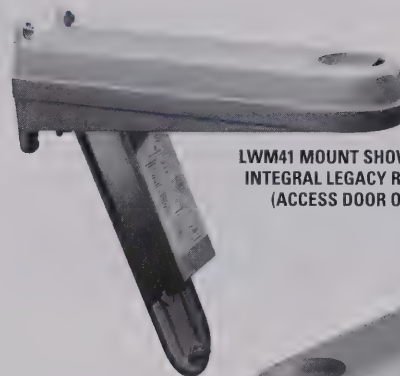
- Easy to Install
- Lightweight, Cast-Aluminum Construction
- Supports up to 150 Pounds (68 kg)
- For Use with Legacy® Integrated Positioning Systems
- Can Be Used with Optional Legacy® LRD41 Series Receiver
- Optional Access Panel Lock Kit
- Optional Corner, Parapet, and Pole Adapters Available

The **LWM41** is a wall mount designed for use with all Legacy® integrated positioning systems.

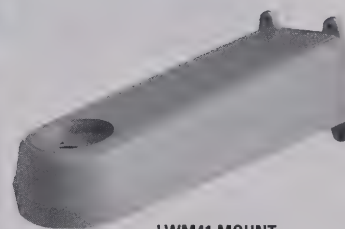
Constructed from cast aluminum, the **LWM41** is capable of supporting up to 150 pounds (68 kg). This timesaving and easy-to-install mount houses the entire Legacy system (pan/tilt, enclosure, and receiver) in one location. Video and power cables can be routed through the rear or bottom of the mount. A optional block-off plate is supplied for NEMA Type 4 and conduit applications. The bottom access panel is easily accessible for installation and maintenance of the optional receiver, and an access panel lock kit (LK4500) is available for additional security.

Optional Coaxitron receiver (LRD41A11 or LRD41C21/LRD41C22 Series) is available in fixed or variable speed models, with or without presets. Also available is an optional LRD41TLC test/local control module for testing system and lens functions. This plug-in module operates on +5 VDC supplied by the receiver.

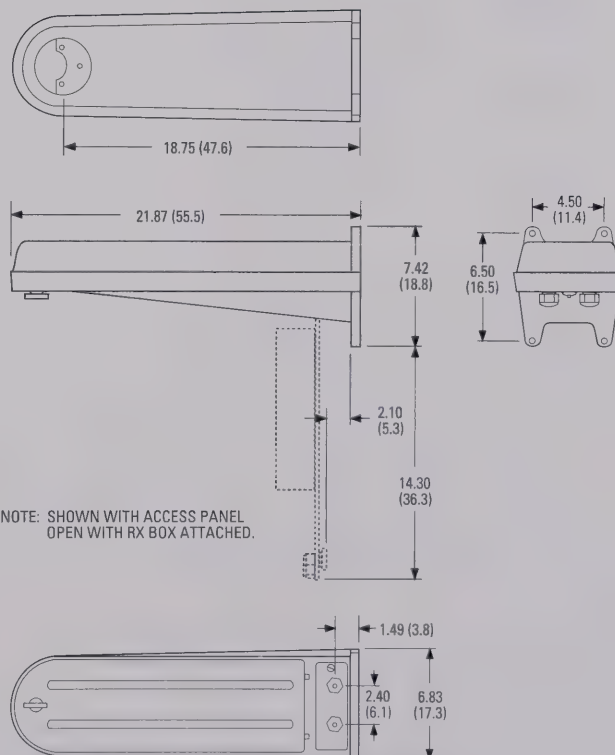
The **LWM41** can be adapted for use in corner, pole, and parapet applications when used with the appropriate mount adapter.



LWM41 MOUNT SHOWN WITH  
INTEGRAL LEGACY RECEIVER  
(ACCESS DOOR OPEN)



LWM41 MOUNT



NOTE: SHOWN WITH ACCESS PANEL  
OPEN WITH RX BOX ATTACHED.

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DataFAX  
SPEC: 2283  
MANUAL: 22836

C283 / REVISED 10-00

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## MODEL

LWM41

Wall mount for Legacy integrated positioning system and optional receiver

## RELATED PRODUCTS

Legacy® Integrated Positioning Systems

Medium-duty system (EH4700L and EH5700L Series enclosure and PT780 Series pan/tilt). Medium-duty system (EH8106L pressurized enclosure and PT780 Series pan/tilt).

LRD41A11 Series

Legacy fixed speed receiver, Coaxitron compatible.

LRD41C21 Series

Legacy fixed speed receiver, Coaxitron/RS-422 compatible with up to 64 presets.

LRD41C22 Series

Legacy variable speed receiver, Coaxitron/RS-422 compatible with up to 64 presets.

LRD41TLC

Test/local control module for use with optional receiver.

## MECHANICAL

Pan/Tilt Mounting

Four 1/4-20 x 5/8-inch cap screws and washers (supplied) for attaching pan/tilt

Mounting Method

Secure with four fasteners suitable for mounting surface (minimum 5/16-inch recommended, not supplied)

## GENERAL

Construction

Aluminum casting

Finish

Gray polyester powder coat

Maximum Load

150 lb (68 kg)

Unit Weight

9.51 lb (4.32 kg)

14 lb (6.35 kg) approximate with receiver installed

Shipping Weight

12 lb (5.44 kg)

## CERTIFICATIONS/RATINGS

- Meets NEMA Type 4 standards (with all factory-supplied gaskets and block-off plates installed)

## OPTIONAL ACCESSORIES

LK4500

Lock kit (with keys) for LWM41 wall mount access panel

## OPTIONAL MOUNT ADAPTERS

CM400

Corner mount adapter.

PA402

Pole mount adapter. Minimum pole diameter 3 inches.

PP300L

Parapet corner mount adapter. Mounts on top of rooftop or parapet.

PP301L

Parapet corner mount adapter. Mounts to inside of parapet.

PP400

Parapet mount adapter. Mounts to inside/outside of parapet wall.

PP4348

Parapet mount. Mounts to rooftop or horizontal flat surface.



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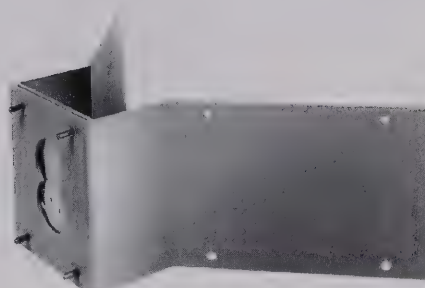
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## CM400 Mount

### CORNER MOUNT, SPECTRA® AND LEGACY® ADAPTER

#### Product Features

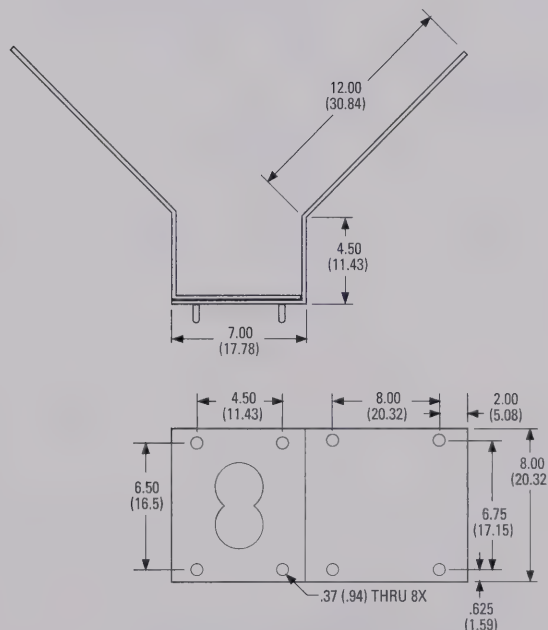
- Low Cost
- Rugged Construction
- Supports up to 75 Pounds (34 kg)
- Corner Mount Adapter for Spectra® and Legacy® Wall Mounts (IWM Series, IDM4018, and LWM41)
- Design Includes Mounting Studs for Quick, Simple, Installation of Wall Mount



The **CM400** is a corner mount adapter designed for use with Spectra® and Legacy® wall mounts. For Spectra, DF5, or DF8 Series pendant domes, use the IWM Series or IDM4018 wall mount. For Legacy positioning systems, use the LWM41 wall mount.

The LWM41, IWM Series, or IDM4018 wall mount is secured to the **CM400** by four 5/16-inch mounting studs; nuts and split lock washers are supplied.

Constructed from aluminum, the **CM400** is capable of supporting up to 75 pounds (34 kg) and features a cable feedthrough hole for easy routing of video and power cables. A block-off plate is included for non-feedthrough outdoor applications.



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DataFAX  
SPEC: 2281  
MANUAL: 22816

C281 / REVISED 10-03

International Organization  
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## MODEL

CM400

Corner mount adapter for IWM Series, IDM4018, and LWM41 wall mounts

## RELATED PRODUCTS

IWM Series

Wall mount with cable feedthrough for use with Spectra, DF5, and DF8 Series pendant style domes.

IDM4018

Wall mount with removable front end cap and cable feedthrough for use with Spectra®, DF5, and DF8 Series pendant style domes.

LWM41

Legacy® wall mount. For use with Legacy integrated positioning systems.

EA4348

EWM adapter plate. Allows an EWM wall mount to be installed on a CM400 for use with an Esprit Series integrated positioning system.

## MECHANICAL

Adapter Mounting

Four 5/16-inch mounting studs (nuts and split lock washers supplied) for attaching LWM41, IDM4018, EA4348, or IWM Series mount

Mounting Method

Secure with eight fasteners suitable for mounting surface (minimum 1/4-inch recommended, not supplied)

## GENERAL

Construction

6061 T6 aluminum,  
0.125-inch (3.18mm) thick  
Gray polyester powder coat

Finish

Maximum Load

75 lb (34 kg)

Unit Weight

3 lb (1.36 kg)

Shipping Weight

8 lb (3.62 kg)

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## PA402 Mount

### POLE MOUNT, SPECTRA® AND LEGACY® ADAPTER

#### Product Features

- Low Cost
- Rugged Construction
- Supports up to 75 Pounds (34 kg)
- Pole Mount Adapter for Spectra® and Legacy® Wall Mounts (IWM Series, IDM4018, and LWM41)
- Design Includes Mounting Studs for Quick, Simple Installation of Wall Mount



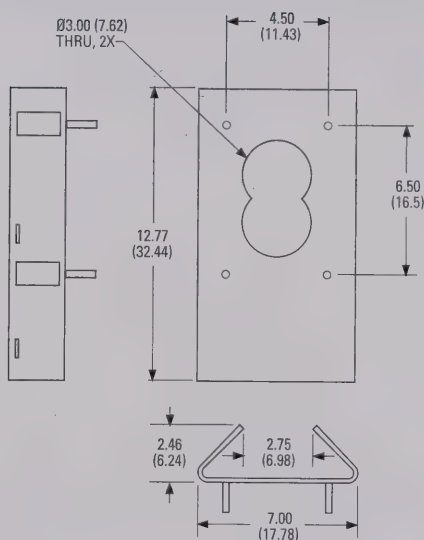
PA402 SHOWN WITH  
REMOVABLE BLOCK-OFF PLATE

The **PA402** is a pole mount adapter designed for use with Spectra® and Legacy® wall mounts. For Spectra, DF5, or DF8 Series pendant domes, use the IWM Series and IDM4018 wall mount. For Legacy positioning systems, use the LWM41 wall mount.

The LWM41, IWM Series, or IDM4018 wall mount is secured to the **PA402** by four 5/16-inch mounting studs; nuts and split lock washers are supplied.

Constructed from aluminum, the **PA402** is capable of supporting up to 75 pounds (34 kg) and features a cable feedthrough hole for easy routing of video and power cables. A block-off plate is included for non-feedthrough outdoor applications.

The **PA402** is for use on poles having a minimum 3-inch diameter. Mount is supplied with stainless steel mounting straps that are 28.5 inches (72.39 cm) long.



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DataFAX  
SPEC: 2274  
MANUAL: 22746

C274 / REVISED 10-03

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# TECHNICAL SPECIFICATIONS

## MODEL

PA402

Pole mount adapter for IWM Series,  
IDM4018 and LWM41 wall mounts

## RELATED PRODUCTS

IWM Series

Wall mount with cable feedthrough for use  
with Spectra, DF5, or DF8 Series pendant  
style domes.

IDM4018

Wall mount with removable front end cap and  
cable feedthrough for use with Spectra, DF5,  
or DF8 Series pendant style domes.

LWM41

Legacy wall mount. For use with Legacy  
integrated positioning systems.

EA4348

EWM adapter plate. Allows an EWM wall  
mount to be installed on a PA402 for use with  
an Esprit Series integrated positioning  
system.

## MECHANICAL

Adapter Mounting

Four 5/16-inch mounting studs (nuts and split  
lock washers supplied) for attaching LWM41,  
IDM4018, EA4348, or IWM Series mount

Mounting Method

Slots for mounting straps; three stainless  
steel straps supplied.  
Strap length 28.5 inches (72.39 cm)

## GENERAL

Construction

5052H32 aluminum, 0.190-inch (4.8mm) thick

Finish

Gray polyester powder coat

Maximum Load

75 lb (34 kg)

Unit Weight

3.48 lb (1.58 kg)

Shipping Weight

5 lb (2.27 kg)

Indicates change or addition.



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## PP300L/PP301L Mount

### PARAPET, CORNER MOUNT, SPECTRA®, ESPRIT®, AND LEGACY® ADAPTER

#### Product Features

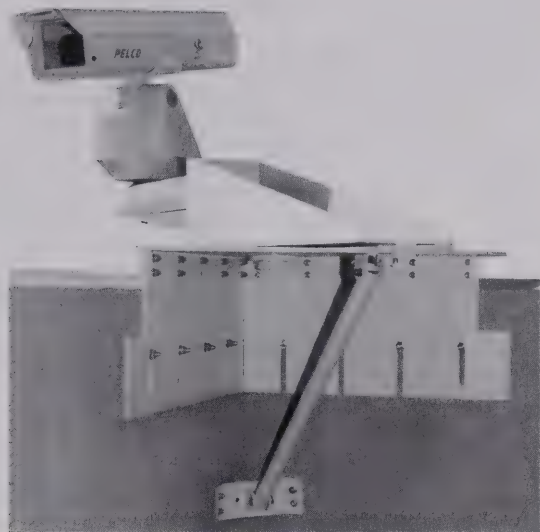
- Aluminum Construction
- Supports up to 175 Pounds (78.75 kg)
- Parapet Mount Adapter for Spectra®, Esprit®, and Legacy® Wall Mounts (IWM-GY, EA4348 with EWM, and LWM41)
- Design Includes Four Mounting Studs for Quick, Simple Installation of Wall Mount
- Mounts to Inside of Parapet Corner (PP301L) or on Top of Roof and Parapet (PP300L)

The **PP300L** and **PP301L** parapet adapters are designed for use with Spectra®, Legacy®, and Esprit® wall mounts. For Spectra and DF5 Series pendant domes, use the IWM-GY wall mount. For Esprit positioning systems, use the EA4348 adapter with EWM wall mount. For Legacy integrated positioning systems, use the LWM41 wall mount.

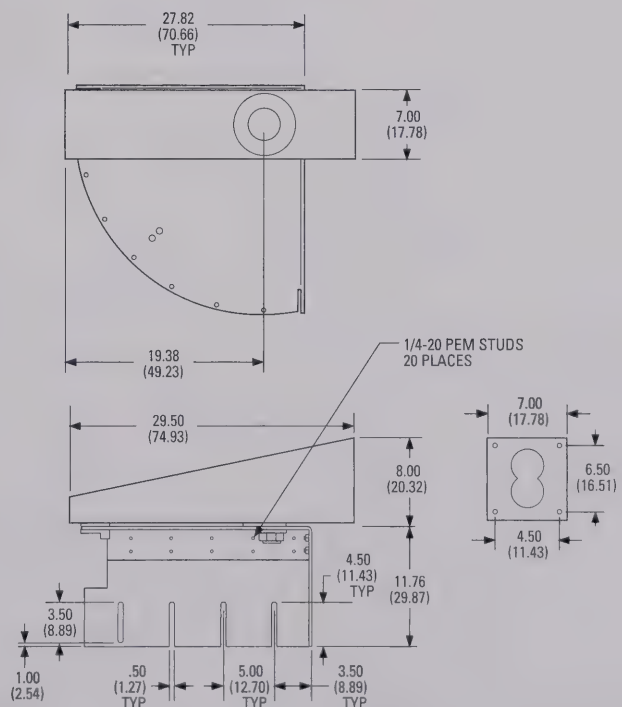
These mounts reduce the expense and hazards of installing and servicing equipment that is mounted on rooftops and parapets.

The **PP300L** mounts equipment on the corner of rooftops and parapets. The **PP301L** mounts equipment to the inside of parapet corners. Both mounts are capable of 360-degree rotation in the horizontal plane, allowing equipment to be installed or serviced from the rooftop easily and safely.

Also included is a support strut to provide stability and balance to the load. This is especially helpful in applications where strong wind currents are prevalent.



PP301L PARAPET CORNER MOUNT SHOWN WITH LWM41 WALL MOUNT AND LEGACY PAN/TILT AND ENCLOSURE



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

PP301L DIMENSION DRAWING



DataFAX  
SPEC: 2211  
MANUAL: 22116

C211 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

PP300L	Parapet corner adapter; mounts on corner of rooftops and parapets. Includes strut for added support. For use with IWM-GY, LWM41, and EA4348 mounts.
PP301L	Same as PP300L except mounts to inside corner of parapet wall.

## RELATED PRODUCTS

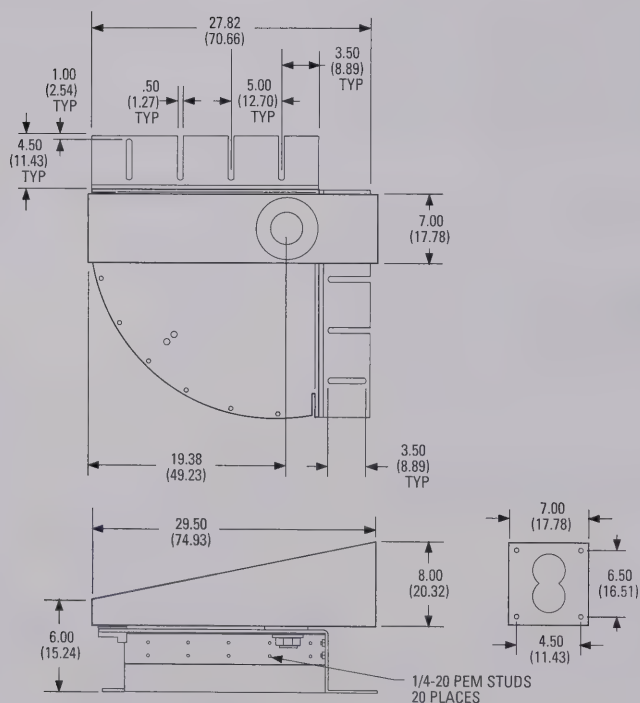
IWM-GY	Wall mount for use with Spectra and DF5 Series pendant dome only. (In this application, the IWM-GY cannot be used with any other pendant dome due to clearance limitations.)
EA4348	EWM adapter plate. Allows an EWM wall mount to be installed on a PP300L/PP301L for use with an Esprit® Series integrated positioning system.
LWM41	Wall mount for Legacy integrated positioning systems

## MECHANICAL

Positioning Adjustment	90°
Lock Positions	15° increments
Suggested Mounting Method	Secure to parapet or rooftop with twelve suitable fasteners; eight for parapet mount and four for strut (not supplied). (3/8-inch diameter suggested minimum for PP300L and PP301L and 1/4-inch for strut)
Adapter Mounting	Four 5/16-inch mounting studs for attaching mount

## GENERAL

Maximum Load	175 lb (78.75 kg) approximate
Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Outdoor
Unit Weight	
PP300L	33.77 lb (15.32 kg)
PP301L	Consult factory
Shipping Weight	
PP300L	44 lb (19.93 kg)
PP301L	23 lb (10.42 kg)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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PP300L DIMENSION DRAWING

Indicates change or addition.



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## PP4348 Mount

### PARAPET, ROOFTOP MOUNT, SPECTRA®, ESPRIT®, PS20, AND LEGACY® ADAPTER

#### Product Features

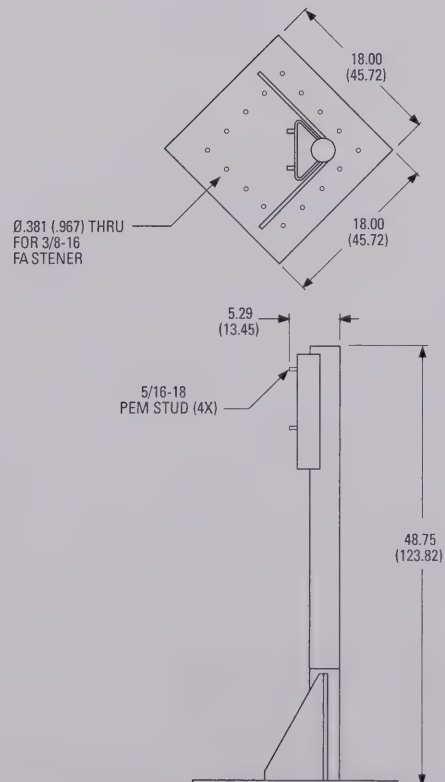
- Aluminum Construction
- Cable Feedthrough Hole
- Supports up to 75 Pounds (34 kg)
- Rooftop Parapet Adapter for Spectra®, Esprit®, PS20 Scanner, and Legacy® Wall Mounts
- Design Includes Four Mounting Studs for Quick, Simple Installation of Wall Mount
- Mounts on a Flat Roof or Smooth Horizontal Surface

The **PP4348** is a rooftop parapet adapter designed for use with Spectra®, Esprit®, PS20 Series, and Legacy® wall mounts. For Spectra, DF5, or DF8 Series pendant domes, use the IWM Series or IDM4018 wall mounts. For Esprit positioning systems, use the EA4348 adapter with the EWM wall mount. A PS20 Series scanner can be mounted using the EA4348 adapter with the PSWM wall mount. For Legacy integrated positioning systems, use the LWM41 wall mount.

The **PP4348** mounts directly on a flat roof or smooth horizontal surface and is sufficient in height to clear most parapet walls. The **PP4348** is capable of complete 360-degree rotation and will support up to 75 pounds (34 kg).

The **PP4348** is constructed of aluminum and has a gray polyester powder coat finish.

PP4348 WITH EA4348  
ADAPTER, EWM WALL  
MOUNT, AND ESPRIT  
POSITIONING SYSTEM



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2204  
MANUAL: 22046

C204 / REVISED 10-02

International Organization  
for Standardization  
Registered ISO 9001



## MODEL

PP4348	Rooftop parapet adapter for use with IWM Series, IDM4018, LWM41, and EA4348 mounts
--------	--

## RELATED PRODUCTS

IWM Series	Wall mount with cable feedthrough hole for Spectra, DF5, and DF8 Series pendant domes
IDM4018	Wall mount with cable feedthrough hole and removable front end cap for Spectra, DF5, and DF8 Series pendant domes.
EA4348	Adapter plate for mounting Esprit and PS20 Series scanner; use with EWM wall mount for Esprit or PSWM wall mount for PS20 Series scanner.
LWM41	Wall mount for Legacy integrated positioning systems

## MECHANICAL

Positioning Adjustment	Unlimited 360°
------------------------	----------------

## GENERAL

Suggested Mounting Method	Secure with a minimum of eight 3/8-inch fasteners (not supplied) suitable for the mounting surface
Adapter Mounting	Four 5/16-inch mounting studs, flat washers, lock washers and nuts supplied for mounting LWM41, IDM4018, IWM Series, or EA4348 mount
Maximum Load	75 lb (34 kg)
Construction	Aluminum
Finish	Gray polyester powder coat
Environment	Indoor/outdoor
Unit Weight	29.63 lb (13.44 kg)
Shipping Weight	42 lb (19.03 kg)



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## PP400 Mount

### PARAPET MOUNT, SPECTRA® AND LEGACY® ADAPTER

#### Product Features

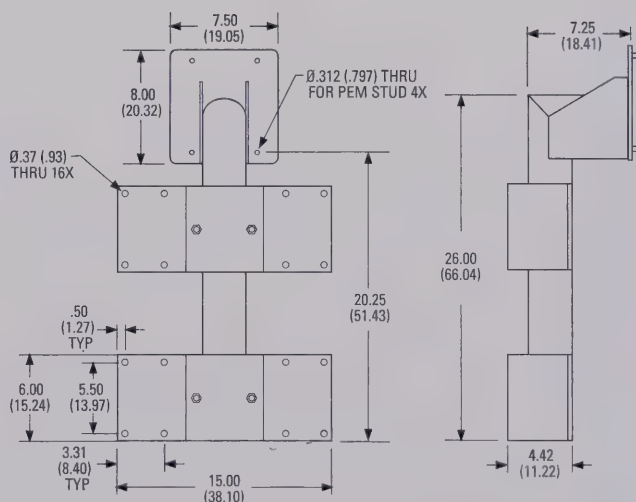
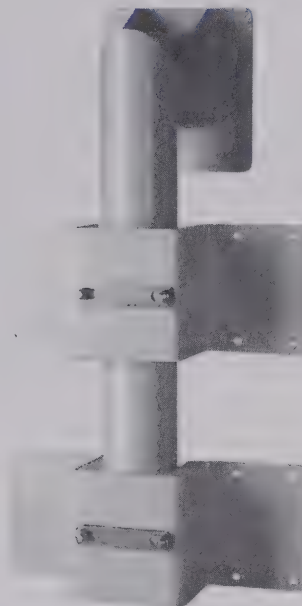
- Low Cost
- Rugged Construction
- Supports up to 75 Pounds (34 kg)
- Parapet Mount Adapter for Spectra® and Legacy® Wall Mounts
- Design Includes Mounting Studs for Quick, Simple, Installation of Wall Mount
- Mounts to Inside of Parapet; Minimum Parapet Height 18 Inches (45.72 cm)

The **PP400** is a parapet adapter designed for use with Spectra® and Legacy® wall mounts. For Spectra, DF5, or DF8 Series pendant domes, use the IWM Series or IM4018 wall mounts. For Legacy integrated positioning systems, use the LWM41 wall mount.

The wall mounts are secured to the **PP400** by four 5/16-inch mounting studs; nuts and split lock washers are supplied.

Constructed from aluminum, the **PP400** is capable of supporting up to 75 pounds (34 kg) and features a cable feedthrough hole for easy routing of video and power cables.

The **PP400** mounts to the inside of the parapet; a minimum 18-inch parapet height is required.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2272  
MANUAL: 22726

C272 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001



## MODEL

PP400 Parapet mount adapter for IWM Series, IDM4018, and LWM41 wall mounts

## RELATED PRODUCTS

IWM Series	Wall mount with cable feedthrough hole for Spectra, DF5, and DF8 Series pendant domes
IDM4018	Wall mount with cable feedthrough hole and removable front end cap for Spectra, DF5, and DF8 Series pendant domes
LWM41	Wall mount for Legacy integrated positioning systems
EA4348	EWM adapter plate. Allows an EWM wall mount to be installed on a PP400 for use with an Esprit® Series integrated positioning system

## MECHANICAL

Adapter Mounting	Four 5/16-inch mounting studs (nuts and split lock washers supplied) for attaching LWM41, IDM4018, EA4348, or IWM Series wall mount
Mounting Method	Secure to parapet with sixteen fasteners suitable for mounting surface (minimum 1/4-inch diameter recommended, not supplied)

## GENERAL

Construction	5052H32 aluminum, 0.190-inch (4.8 mm) thick
Finish	Gray polyester powder coat
Maximum Load	75 lb (34 kg)
Unit Weight	12.15 lb (5.51 kg)
Shipping Weight	15 lb (6.79 kg)

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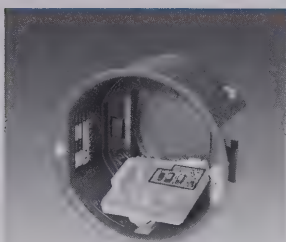
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## MISCELLANEOUS CAMERA SITE

### Camera System and Camera Accessories



#### Protocol Translators

Pelco manufactures several different protocol translator boards. Each board translates another manufacturer's controller protocol to communicate with Pelco's Spectra® domes and Esprit® systems. Once a translator board is installed, the Spectra dome or Esprit system can receive commands from another controller and convert the commands into Pelco's D protocol.



#### IR Illuminators

Pelco manufactures infrared illuminators for use in low light conditions. These units are designed to assist IR-sensitive cameras in nighttime surveillance applications. The IR illuminators can be mounted to walls or ceilings or used with Legacy® Series or PT1200 Series pan/tilts.



#### Remote Installation/Service Tools

Pelco offers diagnostic/installation tools for Spectra III™ and Esprit positioning systems or any pan/tilt that uses Pelco's D protocol. In the offering are a remote monitor kit (IPS-RMK), remote data port (IPS-RDPE-2), and remote monitor cable (IPS-CABLE). These field service tools allow you to observe video, control PTZ functions, check the address and baud settings, and perform system setup at the installation site. Software upgrades (available online at [pelco.com](http://pelco.com)) can also be performed on Spectra III Series domes.



## NOTES



## TXB Series Translator Board Interface PROTOCOL CONVERTER

### Product Features

- Compatible with Various American Dynamics, Philips (Burle), Sensormatic, and Vicon® Controllers (as specified)
- Converts Command Signals to Pelco's D Protocol
- For Use in Spectra® Domes and Esprit® Systems
- Easy to Install
- Operation Transparent to User

The **TXB Series** translator boards allow various controllers to communicate with Pelco's Spectra® domes and Esprit® systems. The optional subassembly is easy to install in Spectra and Esprit equipment. After setup, the Spectra dome or Esprit system receives commands from the controller and converts them into Pelco's D protocol.

The **TXB Series** has been tested and shown to work with the following systems:

<b>TXB-AD</b>	American Dynamics: AD1600 Series AD2050 Series AD2091 Series AD2150 Series
<b>TXB-B</b>	Philips (Burle): LTC5136 AutoDome® Controller LTC5138 Virtual Keyboard (Rev. 1.01) LTC8300 Series LTC8500 Fixed Speed Series LTC8800 Variable Speed Series LTC8850 Graphical User Interface
<b>TXB-S422</b>	Sensormatic Electronics Corporation: RC58 (VM1-Sensor Vision®) RC216 (VM96-View Manager) AD2083-02
<b>TXB-V</b>	Vicon® Industries, Inc.: V1300X-DVC Remote Control V1422 Matrix Controller VPS324 Matrix Controller V4480SCC Matrix 44® Card Cage V6680SCC Matrix 66™ Card Cage

Based on the information published by the manufacturers of these controls, Pelco has reason to believe the **TXB Series** will also work with additional models listed on the reverse side.



TXB-AD TRANSLATOR BOARD  
(SHOWN INSTALLED WITH  
SPECTRA® BACK BOX)

*All companies make changes and improvements in their products on a regular basis. Because this product is interfacing with equipment not manufactured by Pelco, the possibility exists that the interface protocols have changed or are in a different configuration from earlier tested units; therefore, an incompatibility may occur. The existence of prior successful installations indicates our intent to provide equipment compatible with other manufacturers, but does not guarantee successful results without on-site integration testing.*

*Pelco recommends purchasing a single unit for bench testing before the purchase and installation of this product in quantity. Should any problems occur, Pelco will provide on-site technical support (North American installations only) to analyze the interface protocols of your system. We will typically schedule this visit within one week of when the problem is reported to Pelco Technical Support. Pelco will, at its expense, endeavor to correct the interface incompatibility within two weeks on a high priority basis. During these visits, the end user must agree to give Pelco reasonable access to the system in order to study and correct the protocol incompatibility.*

*In the unlikely event that Pelco is unable to make the translator work in the system, Pelco will accept the return of any Pelco products associated with the translator and refund the amounts paid for these products plus freight expenses. Because Pelco recommends a bench test prior to installation, Pelco will not be liable for any installation costs or lost revenues in the event it cannot solve the compatibility problem.*



DataFAX

SPEC: 21492

MANUAL: Not Available through DataFAX

C1492 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001



## TECHNICAL SPECIFICATIONS

## MODELS

TXB-AD	Translator board for American Dynamics controllers
TXB-B	Translator board for Philips (Burle) controllers
TXB-S422	Translator board for Sensormatic controllers
TXB-V	Translator board for Vicon® controllers

## GENERAL

Construction	Printed circuit board (PCB)
Mounting	Subassembly PCB plugs into interconnect PCB of Spectra® and Esprit®
Dimensions	0.4" H x 1.6" W x 2.1" L (1.0 x 4.1 x 5.3 cm)
Weight	
Unit	0.05 lb (0.02 kg)
Shipping	1 lb (0.45 kg)

## CERTIFICATIONS

- CE compliant (when installed in Spectra or Esprit)
- FCC, Class B (when installed in Spectra or Esprit)

## COMPATIBLE PELCO PRODUCTS

Esprit® Positioning Systems  
Spectra® Series Domes



TXB-AD TRANSLATOR BOARD  
(SHOWN INSTALLED IN ES31C SERIES  
INTEGRATED POSITIONING SYSTEM).  
(SIDE COVER HAS BEEN REMOVED.)

## COMPATIBLE CONTROLLERS

Primary	Secondary*
<b>American Dynamics</b> AD1600 Series AD2050 Series AD2150 Series	AD1650 Series AD2350 Series
<b>Philips (Burle)</b> LTC5136 AutoDome® Controller LTC5138 Virtual Keyboard [Rev. 1.01] (Allegiant® and AutoDome® Systems) LTC8300 Series (Allegiant® System) LTC8500 Fixed Speed Series (Allegiant® System) LTC8800 Variable Speed Series (Allegiant® System) LTC8850 Graphical User Interface (Allegiant® System)	LTC8600 Series (Allegiant® System) LTC8900 Series (Allegiant® System)
<b>Sensormatic Electronics Corporation</b> RC58 (VM1-Sensor Vision®) RC216 (VM96-View Manager) AD2083-02	AD2083/02 American Dynamics protocol translator AD2083/02A American Dynamics protocol translator
<b>Vicon®</b> V1300X-DVC Remote Control V1422 Matrix Controller VPS324 Matrix Controller V4480SCC Matrix 44® Card Cage V6680SCC Matrix 66™ Card Cage	V1300 Series NOVA™ Programmable Matrix Switching System V1400X-DVC System Console Control Station VPS1344 Matrix Switching System

\*Based on the information published by these manufacturers, Pelco has reason to believe the TXB Translator Board will also work with these models  
(see disclaimer on front).

Indicates change or addition.



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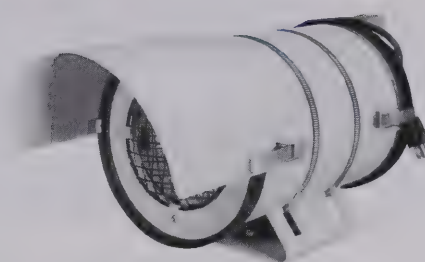


## LL27 Series Infrared Illuminator

### NARROW SPOT OR MEDIUM/WIDE FLOOD

#### Product Features

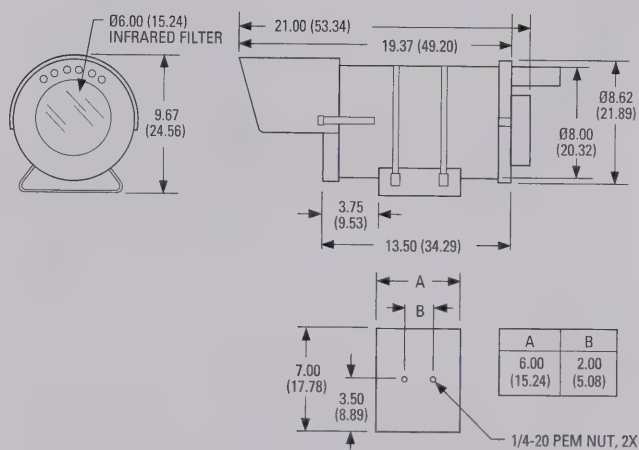
- 120 VAC or 230 VAC Input
- Automatic Photocell On/Off
- Accepts Readily Available Sealed-Beam Lamps
- Narrow Spot and Medium/Wide Flood Versions
- Air-Cooled for Longer Bulb Life



Pelco's **LL27 Series** infrared illuminator is designed to be used with low light level cameras with sensitivity in the IR spectrum (above 700 nm) for nighttime surveillance when a minimum of visible illumination is required. An IR "covert" filter transmits approximately 0.01 percent of the visible light spectrum. Automatic on/off operations are controlled by a photocell with a time delay feature that prevents the unit from being switched off by a momentary beam of light such as that from a headlight. This rugged weatherproof unit is equipped with a built-in sun visor, quick-release latches for ease of service, and sturdy mounting cradle.

Three models are available; the **LL27MF** with medium flood lamp, the **LL27WF** with wide flood lamp, and the **LL27NS** with narrow spot lamp for maximum distance coverage. All models are equipped with a highly efficient PAR56 sealed-beam lamp that provides an optimally uniform field of illumination, making the illuminator effective with shorter focal length lenses.

To ensure longer bulb life, all models are equipped with a built-in blower.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2920  
MANUAL: 29206

C920 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## TECHNICAL SPECIFICATIONS

## MODELS

LL27MF	Infrared illuminator with 500 watt, medium flood lamp
LL27NS	Infrared illuminator with 500 watt, narrow spot lamp
LL27NS-3	Same as LL27NS except 230 VAC input and 300 watt, narrow spot lamp
LL27WF	Infrared illuminator with 500 watt, wide flood lamp
LL27WF-3	Same as LL27WF except 230 VAC input and 300 watt, wide flood lamp

## ELECTRICAL

Input Voltage	LL27MF, LL27NS, LL27WF 120 VAC, 50/60 Hz LL27NS-3 and LL27WF-3 230 VAC, 50 Hz
Power Requirements	Input voltage on/off controlled by photocell 515 watts for 120 VAC models, 317 watts for 230 VAC models
Power Cord	Supplied with grounded power cord; US standard (120 VAC) or European standard (230 VAC) plug

## GENERAL

IR Filter	Coated pyrex, 0.190-inch (4.82 mm) thick, transmits approximately 0.01% of visible light.
Wavelength Transmission	≤1% at 715 nm and below ≤5% at 775 nm ±25 nm Avg ≥85% at 875-1200 nm
Average Life (Lamp)	3,500 hours at rated voltage (lamps sensitive to change in voltage)
Construction	6061 Aluminum
Finish	Gray polyester powder coat
Environment	-10° to 120°F (-23° to 49°C)
Unit Weight	LL27LM 3.10 lb (1.41 kg) LL27M 3.10 lb (1.41 kg) LL27MF 11.77 lb (5.34 kg) LL27NS 11.87 lb (5.38 kg) LL27NS-3 11.82 lb (5.36 kg) LL27WF 11.82 lb (5.36 kg) LL27WF-3 11.71 lb (5.31 kg)
Shipping Weight	LL27LM, LL27M 4 lb (1.81 kg) All others 17 lb (7.70 kg)

## CERTIFICATIONS/RATINGS

- CE compliant (models LL27NS-3 and LL27WF-3 only)
- UL Listed (except 230 VAC models)
- Meets NEMA Type 3R standards

## RECOMMENDED MOUNTS

LL27LM	Bracket for mounting LL27 on Legacy® Series pan/tilts.
LL27M	Bracket for mounting LL27 on PT1200 Series pan/tilts.
EM22/MM22	Wall and ceiling/pedestal mounts.
PM2000/PM2010 with AH2000	Ceiling/pedestal mount with adapter.
WM2000 with AH2000	Wall mount with adapter.

## REPLACEMENT LAMPS

PAR56NS	Narrow spot replacement lamp, 500W
PAR56NS-3	Narrow spot replacement lamp, 300W
PAR56MF	Medium flood replacement lamp, 500W
PAR56WF	Wide flood replacement lamp, 500W
PAR56WF-3	Wide flood replacement lamp, 300W

## Minimum Lens Focal Length for Optimum Scene Illumination

Lamp Type	Camera Format			
	1/3"	1/2"	2/3"	1"
Narrow Spot	16 mm	25 mm	32 mm	50 mm
Medium Flood	12 mm	18 mm	24 mm	37 mm
Wide Flood	8 mm	12 mm	16 mm	25 mm

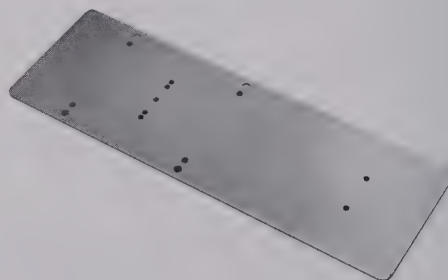
## Typical Maximum Range for Usable Picture with an Infrared Sensitive Camera

Lamp Type	Approximate Angle of View	Distance (at f1.8)	
		120V, 500W	230V, 300W
Narrow Spot	12°H x 8°V	400 ft (121 m)	240 ft (73 m)
Medium Flood	26°H x 10°V	300 ft (91 m)	144 ft (43 m)
Wide Flood	40°H x 19°V	200 ft (60 m)	120 ft (36 m)

**CAUTION:** Prolonged direct exposure to the radiant energy from the illuminator can cause damage to the retina of the eye.



LL27LM MOUNTING BRACKET FOR LEGACY® SERIES



LL27M MOUNTING BRACKET FOR PT1200 SERIES PAN/TILT

Indicates change or addition.



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## Spectra® and Esprit® Positioning Systems

### REMOTE INSTALLATION/SERVICE TOOLS

#### Product Features

##### Remote Monitor Kit (IPS-RMK)

- Includes PDA, Monitor, IPS-CABLE, and Carrying Case
- Plugs into the RJ-45 Port of the Spectra III™ SE/Spectra III Dome Drive or IPS-RDPE-2
- Spectra III SE/Spectra III System – PTZ Control, Full Programmability, and Software Upload Capabilities
- Esprit® System – PTZ Control and Full Programmability When Used with the IPS-RDPE-2

##### Remote Data Port (IPS-RDPE-2)

- Designed to Provide Ground Level, Local Interface to Spectra III and Esprit Series Systems When Using IPS-RMK or IPS-CABLE
- Mounts to a Pole or Wall Near Positioning System
- One Remote Data Port is Required Per Positioning System

##### Remote Monitor Cable (IPS-CABLE)

- Serial Interface Cable for a Windows®-Based PC, Palm™ OS Compatible Handheld, or iPaq™ Pocket PC
- Connects to Spectra III SE/Spectra III Dome Drive or IPS-RDPE-2



IPS-RMK  
REMOTE MONITOR KIT



IPS-RDPE-2  
REMOTE DATA PORT



IPS-CABLE  
REMOTE MONITOR CABLE

Pelco's remote monitor kit (**IPS-RMK**), remote data port (**IPS-RDPE-2**), and remote monitor cable (**IPS-CABLE**) are field service tools designed to assist in the installation and servicing of Spectra III SE/Spectra III, Esprit, or any pan/tilt that uses Pelco's D protocol. Use these tools at the installation site to observe video, verify the operation of the PTZ controls, check the address and baud settings, and program the positioning system. Software upgrades\* also can be performed with Spectra III SE/Spectra III domes.

The **IPS-RMK** is a complete kit consisting of a 5.6-inch, TFT-LCD, battery-powered monitor; PDA handheld; carrying case; interface cables (including the **IPS-CABLE**); and software. The kit plugs directly into the RJ-45 port of the Spectra III SE/Spectra III dome drive for full control, setup, and upgrade capabilities. The **IPS-RMK**, when used with an **IPS-RDPE-2**, can also control pan/tilt/zoom functions and program a Spectra or Esprit positioning system or any other system that accepts Pelco's D protocol.

The **IPS-RDPE-2** remote data port brings all the functionality of the **IPS-RMK** and **IPS-CABLE** to ground level. The remote data port works with Spectra III and Esprit Series systems. The **IPS-RDPE-2** is compatible with coaxial video and UTP video control systems using D, P, or Coaxitron® protocols.

The **IPS-CABLE** (part of the **IPS-RMK**) can be ordered separately for those who wish to connect their own PC or PDA and monitor directly to the RJ-45 port of the **IPS-RDPE-2** or the Spectra III SE/Spectra III dome drive. It is compatible with most serial cable/connectors for Windows®-based PCs, Palm™ OS compatible handhelds, and iPAQ™ pocket PCs.

\*Software upgrades for Spectra III SE/Spectra III are available online at [pelco.com](http://pelco.com).



DataFAX

SPEC: 22453

MANUAL: 224536 (IPS-RMK), 224736 (IPS-RDPE-2)

C2453 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

IPS-RMK	Remote monitoring kit with PDA, monitor, IPS-CABLE, and carrying case
IPS-CABLE	Remote monitor cable
IPS-RDPE-2	Remote data port for monitoring at ground level

## IPS-RMK

### Palm™ OS Compatible Handheld

Size	4.7" H x 3.1" W x .7" D (11.9 x 7.9 x 1.8 cm)
Display	Advanced LCD with backlight
Expansion	Serial port
HotSync®	Serial cradle
Software	Spectra III Programming, PTZ control, and HotSync technology for local and remote synchronization with your PC

### Monitor

Display	5.6" diagonal, TFT-LCD, active matrix
Backlight	Built-in (CCFT)
Input Signal	NTSC/PAL (selectable)
Dot Format	960 (H) x 234 (V) dots
Dot Pitch	0.120 mm (H) x 0.360 mm (V)
Brightness Rating	200 cd/m2 (Nit)
Number of Pixels	224,640 dots
Contrast Ratio	100:1
Viewing Angle L/R/T/B	40°/40°/10°/30°
Pixel Configuration	Stripe
Power Requirements	12-15 VDC, 1 A
Power Consumption	6.5 W
Battery Pack	Holds 8 AA or 10 NiCad, rechargeable batteries (batteries not included)
Battery Life	Approximately 2.5 hours
Input Signal Level	1.0 Vp-p (positive) 75 ohms
Operating Temperature	23° to 104°F (-5° to 40°C)
Storage Temperature	-13° to 108°F (-25° to 60°C)
Connectors	
Video In/Out	BNC, female
DC Input Power	2.1 mm jack

### GENERAL

Unit Weight	2.9 lb (1.3 kg)
Shipping Weight	6 lb (2.7 kg)

### CERTIFICATIONS/RATINGS

- CE, Class B
- FCC, Class B

## IPS-CABLE

Connectors	
Receiver	One RJ-45 serial interface connector
Video	One BNC, male connector
Control	One serial DB-9 female connector (mating cable required for Palm™ OS compatible handheld and iPaq PC applications)
Length	48" (122 cm)

## IPS-RDPE-2

### ELECTRICAL

Input Voltage	24 VAC
Power Consumption	1 VA

### MECHANICAL

Construction	Aluminum
Finish	Gray polyester powder coat
Cable Entry	Two hole plugs; will accommodate 3/4-inch (1.91 cm) conduit
Mount Method	Four 0.375-inch (0.95 cm) holes on mounting plate
Latch	One stainless steel link-lock latch secured with screw; latch also can be secured with padlock (not supplied)

### GENERAL

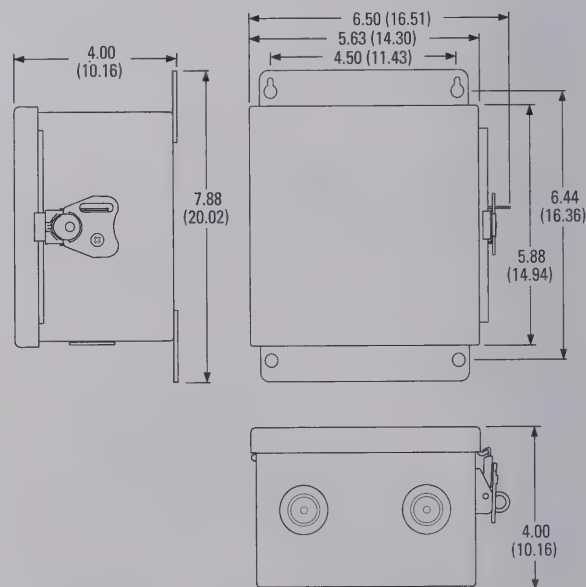
Environment	Indoor/outdoor
Operating Range	-50°F to 122°F (-45°C to 50°C)
Unit Weight	6.5 lb (2.95 kg)
Shipping Weight	8 lb (3.63 kg)

### OPTIONAL ACCESSORY

PA402	Pole mount adapter
-------	--------------------

### CERTIFICATIONS/RATINGS

- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 4X standards



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

### IPS-RDPE-2 DIMENSION DRAWING

Indicates change or addition.



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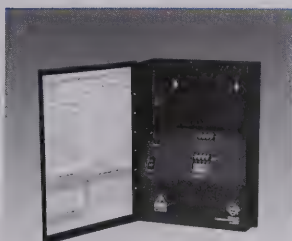
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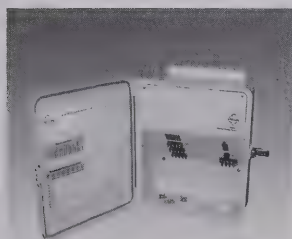


## POWER SUPPLIES AND RELAY BOXES

Easy-To-Install Solutions for Any Sized System

### Power Supplies

Pelco offers single and multiple 24 VAC camera power supplies. The single camera power supply is ideal for fixed-camera applications. Multiple camera power supplies are an economical way to power up to 16 cameras, domes, and pan/tilts with a single power source. All Pelco power supplies have an input voltage of 120/230 VAC, and most are CE, UL, or cUL compliant.

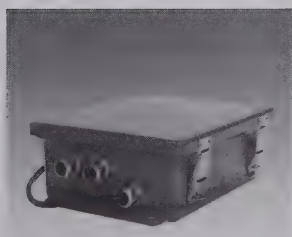


### Relay Boxes

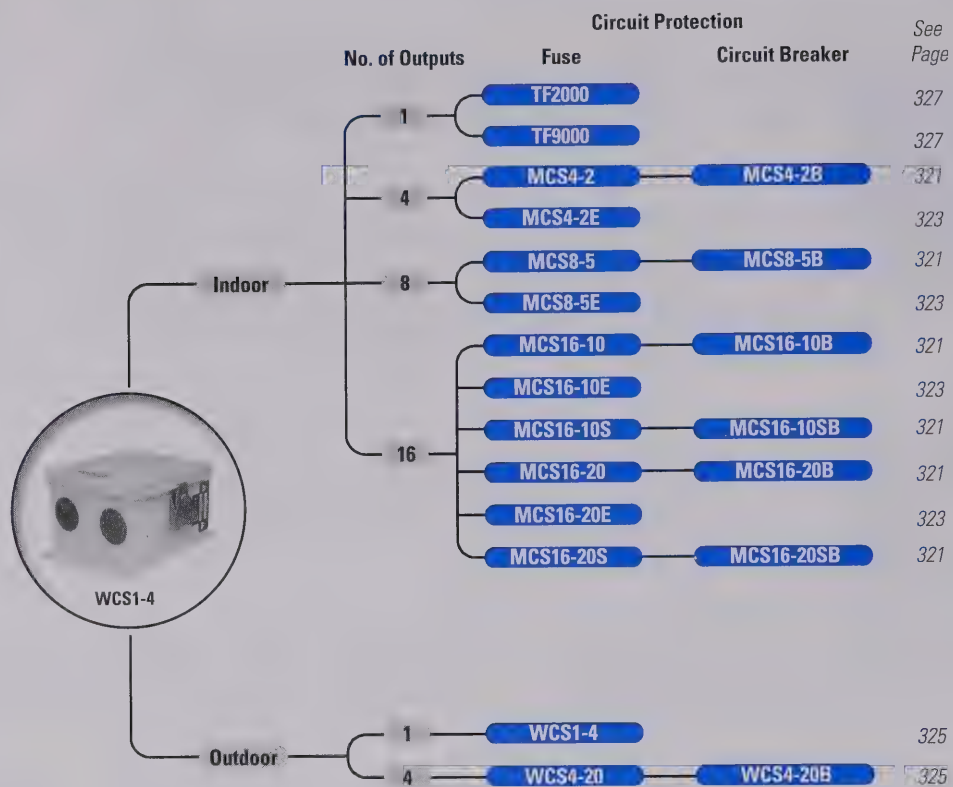
Pelco relay boxes were designed as a simple, economical method of increasing the operating distance between the control unit and the pan/tilt or scanner, up to a maximum of 13,000 feet (3,962 m). Pelco relay boxes also reduce installation costs by permitting the use of smaller gauge wire.

Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Power Supply Selection Guide



# Power Supply Selection Guide





## MCS Series Power Supply

### MULTIPLE 24 VAC POWER SUPPLY, INDOOR

#### Product Features

- 2, 5, 10, or 20 Amp Capacities
- 4, 8, or 16 Outputs
- Fuse or Circuit Breaker Protection;  
Spare Fuses Included with Fused Models Only
- 120 VAC or 230 VAC Selectable Input
- 24 VAC Output or 28 VAC Output for Longer Wire Runs
- AC Power Indicator with Power On/Off Switch
- Compatible with Cameras, Domes, and Pan/Tilts
- Models with Circuit Breakers Have Class 2 Rated Outputs



MCS16-10

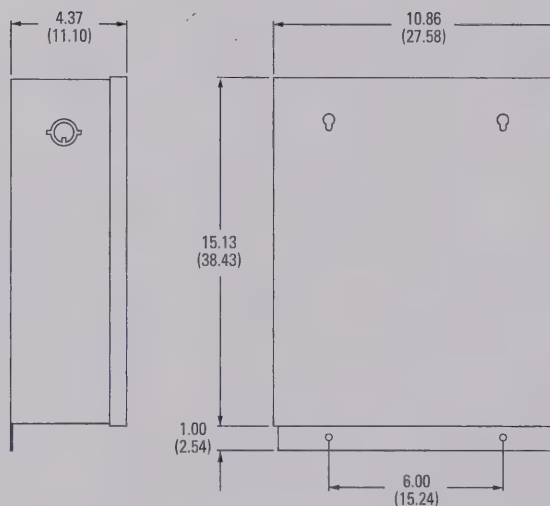
Power supplies in the **MCS Series** offer a variety of configurations for powering up to 16 units from a single power source.

The power supplies provide 24 VAC output for 4, 8, or 16 units. To compensate for voltage losses over long wire runs, 28 VAC outputs also are available on most models. The power supplies have a selectable input of 120 or 230 VAC and are packaged in an easy-to-install metal enclosure that has ample room for wiring connections and conduit entries.

For integrated systems such as Spectra® and Esprit® the higher capacity models are capable of handling pan/tilt and receiver operation in addition to camera functions. (See product capacity chart.)

Models are available with either fuses or self-resetting circuit breakers on each output. Fused models provide a greater degree of protection for the camera because they are faster acting and more precise. Circuit breakers will self-reset when the fault is corrected, eliminating the need for replacing fuses. However, the amount of current required to trip a circuit breaker can vary as much as 100% depending on temperature. In the fused models, the values of fuses can be changed depending upon the specific current requirements of the equipment connected.

The **MCS16-10S**, **MCS16-10SB**, **MCS16-20S**, and **MCS16-20SB** are 16-output supplies that have individual power switches and LEDs on each output. This is a popular feature in larger systems where it is frequently necessary to power-down individual units.

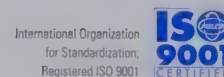


NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2653  
MANUAL: 26536

C653 / REVISED 10-03



## MODELS

MCS4-2	Indoor multiple power supply, 120/230 VAC input. Four fused 24 VAC outputs, total current capacity of 2 A (48 VA).
MCS4-2B	Same as MCS4-2 except has circuit breakers.
MCS8-5	Indoor multiple power supply, 120/230 VAC input. Eight fused 24/28 VAC outputs, total current capacity of 5 A (120 VA).
MCS8-5B	Same as MCS8-5 except has circuit breakers.
MCS16-10	Indoor multiple power supply, 120/230 VAC input. Sixteen fused 24/28 VAC outputs, total current capacity of 10 A (240 VA).
MCS16-10B	Same as MCS16-10 except has circuit breakers.
MCS16-10S	Same as MCS16-10 except each output has a power switch and power indication LED.
MCS16-10SB	Same as MCS16-10S except has circuit breakers.
MCS16-20	Indoor multiple camera power supply, 120/230 VAC input. Sixteen fused 24/28 VAC outputs, total current capacity of 20A (480 VA).
MCS16-20B	Same as MCS16-20 except has circuit breakers.
MCS16-20S	Same as MCS16-20 except each output has a power switch and power indication LED.
MCS16-20SB	Same as MCS16-20S except has circuit breakers.

### Product Capacity Chart

A partial list of compatible products and the number of units that may be powered by each power supply are listed below. Capacity is based on the vA rating of each product to be used with the power supply.

Product	Power Supply Model			
	MCS4-2/ 4-2B (48 VA)	MCS8-5/ 8-5B (120 VA)	MCS16-10/ 16-10B (240 VA)	MCS16-20/ 16-20B (480 VA)
CCD Camera (12 VA)	4	8	16	16
Indoor DF5 with camera (3 VA)	4	8	16	16
Indoor DF8 with camera (12 VA)	4	8	16	16
Indoor Spectra® (25 VA)	1	4	8	16
Esprit® (70 VA)	—	1	3	6

## MECHANICAL

Cable Entry Four knockouts for either 1/2-inch (1.27 cm) or 3/4-inch (1.91 cm) conduit

## ELECTRICAL

Input Voltage	120 or 230 VAC, 50/60 Hz (as noted in model number)
Output Voltage	
MCS4-2	24 VAC
All Other Models	24/28 VAC

Output Fuse/  
Circuit Breaker Ratings

MCS4-2, MCS4-2B	1.5 A*
All other models	3 A*

Input Connectors  
Output Connectors

Wire nut  
Screw-type barrier strips; models with circuit breakers are suitable for Class 2 wiring

Input Wire Size  
Output Wire Size  
Recommended  
Wiring Distances

12-16 gauge solid wire  
12-22 gauge solid or stranded wire  
See chart below

The following are the recommended maximum distances (transformer to load) and are calculated with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.) Distances are calculated in feet; values in parentheses are meters.

### Recommended Wiring Distance Chart

Input Voltage	Total VA Consumed	Wire Gauge		
		20 AWG (0.5 mm <sup>2</sup> )	18 AWG (1.0 mm <sup>2</sup> )	16 AWG (1.5 mm <sup>2</sup> )
24 VAC	10	283 (86)	451 (137)	716 (218)
	20	141 (42)	225 (68)	358 (109)
	30	94 (28)	150 (45)	238 (72)
	50	56 (17)	90 (27)	143 (43)
28 VAC	10	386 (117)	614 (187)	975 (297)
	20	193 (58)	307 (93)	487 (148)
	30	128 (39)	204 (62)	325 (99)
	50	77 (23)	122 (37)	195 (59)

## GENERAL

Construction  
Finish  
Environment  
Weights

Steel  
Charcoal black polyester powder coat  
Indoor

Unit	Shipping
MCS4-2	14.10 lb (6.40 kg)
MCS4-2B	13.89 lb (6.30 kg)
MCS8-5	17.05 lb (7.73 kg)
MCS8-5B	16.85 lb (7.64 kg)
MCS16-10	20.72 lb (9.40 kg)
MCS16-10B	20.72 lb (9.40 kg)
MCS16-10S	20.35 lb (9.23 kg)
MCS16-10SB	20.48 lb (9.29 kg)
MCS16-20	22.50 lb (10.21 kg)
MCS16-20B	22.47 lb (10.19 kg)
MCS16-20S	22.27 lb (10.10 kg)
MCS16-20SB	22.28 lb (10.11 kg)
	17 lb (7.70 kg)
	20 lb (9.07 kg)
	20 lb (9.07 kg)
	24 lb (10.87 kg)
	24 lb (10.87 kg)
	23 lb (10.41 kg)
	23 lb (10.41 kg)
	26 lb (11.77 kg)
	26 lb (11.77 kg)
	25 lb (11.32 kg)
	25 lb (11.32 kg)

## CERTIFICATIONS/RATINGS

- CE
- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 1 standards

\*Individual output cannot exceed this rating, and the total of all outputs cannot exceed the overall rating of the power supply (see the Models section).



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## MCS\*E Series Power Supply

### MULTIPLE 24 VAC POWER SUPPLY, INDOOR

#### Product Features

- 120 VAC Input, 24 VAC Output
- 2, 5, 10, or 20 Amp Capacities
- 4, 8, or 16 Outputs
- Input and Output Fuse Protection
- Power On/Off Switch
- An Economical Alternative to the MCS Series Power Supply
- Compatible with Cameras, Domes, and Pan/Tilts



MCS8-5E

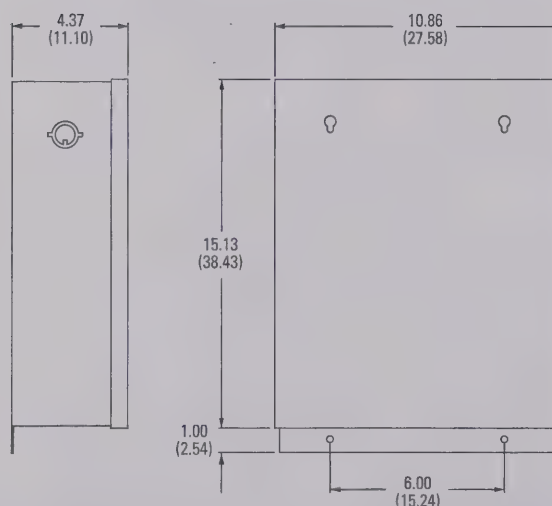
The power supplies in the **MCS\*E Series** offer an economical variety of configurations for powering up to 16 units from a single power source.

The **MCS\*E Series** power supplies provide 24 VAC output for 4, 8, or 16 units. The power supplies have an input of 120 VAC. They are all packaged in an easy-to-install metal enclosure that has ample room for wiring connections and conduit entries.

For integrated systems such as Spectra® and Esprit® the higher capacity models can handle pan/tilt and receiver operation in addition to camera functions. (See product capacity chart.)

Models come with input and output fuses, including spares, to provide a high degree of protection for the camera.

Wiring specifications to assist in the installation of equipment are provided on the inside of the cover. There also is an installation record area for noting the power consumption and types of equipment connected to the power supply.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2655  
MANUAL: 26556

C655 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001





## MODELS

MCS4-2E	Indoor multiple power supply, 120 VAC input. Four 1 A fused 24 VAC outputs, total current capacity of 2 A (48 VA).
MCS8-5E	Indoor multiple power supply, 120 VAC input. Eight 3 A fused 24 VAC outputs, total current capacity of 5 A (120 VA).
MCS16-10E	Indoor multiple power supply, 120 VAC input. Sixteen 3 A fused 24 VAC outputs, total current capacity of 10 A (240 VA).
MCS16-20E	Indoor multiple power supply, 120 VAC input. Sixteen 3 A fused 24 VAC outputs, total current capacity of 20 A (480 VA).

### Product Capacity Chart

A partial list of compatible products and the number of units that may be powered by each power supply are listed below. Capacity is based on the VA rating of each product to be used with the power supply.

Product	Power Supply Model			
	MCS4-2E (48 VA)	MCS8-5E (120 VA)	MCS16-10E (240 VA)	MCS16-20E (480 VA)
CCD Camera (12 VA maximum)	4	8	16	16
Indoor DF5 with camera (3 VA)	4	8	16	16
Indoor DF8 with camera (12 VA maximum)	4	8	16	16
Indoor Spectra® (25 VA)	1	4	8	16
Esprit® (70 VA)	—	2	3	6

## MECHANICAL

Cable Entry	Four knockouts for either 1/2-inch (1.27 cm) or 3/4-inch (1.91 cm) conduit
-------------	--

## ELECTRICAL

Input Voltage	120 VAC, 60 Hz
Output Voltage	24 VAC
Output Fuse Ratings	
MCS4-2E	1 A*
Other Models	3 A*
Input Connectors	Wire nut
Output Connectors	Screw-type barrier strips
Input Wire Size	12-16 gauge solid wire
Output Wire Size	12-22 gauge solid or stranded wire

\*Individual output cannot exceed this rating, and the total of all outputs cannot exceed the overall rating of the power supply (see the Models section).

## Recommended Wiring Distances

The following are the recommended maximum distances (transformer to load) and are calculated with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.) Distances are calculated in feet; value in parentheses are meters.

### Recommended Wiring Distances Chart

Input Voltage	Total VA Consumed	Wire Gauge		
		20 AWG (0.5 mm <sup>2</sup> )	18 AWG (1.0 mm <sup>2</sup> )	16 AWG (1.5 mm <sup>2</sup> )
24 VAC	10	283 (86)	451 (137)	716 (218)
	20	141 (42)	225 (68)	358 (109)
	30	94 (28)	150 (45)	238 (72)
	50	56 (17)	90 (27)	143 (43)

## GENERAL

Construction	Steel
Finish	Charcoal black polyester powder coat
Environment	Indoor
Ratings	Meets NEMA Type 1 standards
Unit Weights	
MCS4-2E	13.45 lb (6.10 kg)
MCS8-5E	14.70 lb (6.67 kg)
MCS16-10E	16.60 lb (7.53 kg)
MCS16-20E	19.70 lb (8.94 kg)
Shipping Weights	
MCS4-2E	16 lb (7.26 kg)
MCS8-5E	17 lb (7.71 kg)
MCS16-10E	20 lb (9.07 kg)
MCS16-20E	23 lb (10.43 kg)



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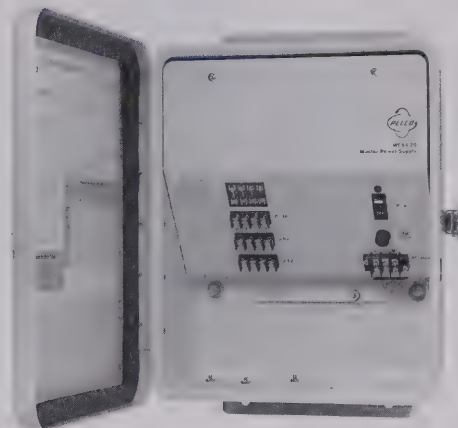
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## WCS Series Power Supply

### 24 VAC POWER SUPPLY, OUTDOOR

#### Product Features

- 4 or 20 Amp Capacities
- 1-4 Outputs
- 120 VAC or 230 VAC Selectable Input
- 24 VAC Output or 28 VAC Output for Longer Wire Runs
- Meets NEMA Type 4X/IP66 Standards for Weatherproof Enclosure
- AC Power Indicator with Power On/Off Switch
- Compatible with Cameras, Domes, and Pan/Tilts
- WCS4-20B Has Class 2 Rated Outputs



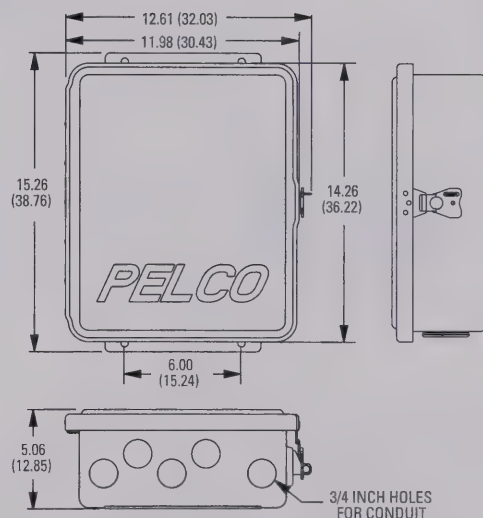
WCS4-20/WCS4-20B

Power supplies in the WCS Series offer a variety of configurations for powering up to four outdoor units from a single power source.

The power supplies provide 24 VAC output for 1-4 units, depending on the model selected. To compensate for voltage losses over long wire runs, 28 VAC outputs also are available on the WCS4-20. The power supplies have a selectable input of 120 or 230 VAC.

For integrated systems such as Spectra® and Esprit®, the power supplies are capable of handling pan/tilt, heater, and blower operation in addition to the camera (see application chart).

The WCS1-4 has one fused output and is capable of handling up to 4 amps (100 VA) of total load. The WCS4-20 is a four-output supply capable of handling up to 20 amps (480 VA) of total load. This model is available with either fuses or self-resetting circuit breakers on each output. Fuses provide a greater degree of protection for the unit because they are faster acting and more precise. Circuit breakers will self-reset when the fault is corrected, eliminating the need for replacing fuses. However, the amount of current required to trip a circuit breaker can vary as much as 100 percent, depending on temperature. In the fused models, the values of fuses can be changed depending upon the specific current requirements of the equipment connected.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2654

MANUAL: 25616 (WCS1-4), 26546 (WCS4-20)

C654 / REVISED 10-03

IP66



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

WCS1-4	Outdoor camera power supply, 100/120/230 VAC input. One 24/26/28 VAC output, total current capacity of 4 A (100 VA).
WCS4-20	Outdoor multiple camera power supply, 120/230 VAC input. Four fused 24/28 VAC outputs, total current capacity of 20 A (480 VA).
WCS4-20B	Same as WCS4-20 except has circuit breakers.

### Product Capacity Chart

A partial list of compatible products and the number of units that may be powered by each power supply are listed below. Capacity is based on the VA rating of each product to be used with the power supply.

Product	Power Supply Model	
	WCS1-4 (100 VA)	WCS4-20/WCS4-20B (480 VA)
CCD Camera (12 VA max)	1	4
Indoor Spectra® (25 VA)	1	4
Outdoor Spectra® (70 VA)	1	4
Outdoor DF5 (62 VA)	1	4
Esprit® (70 VA)	1	4

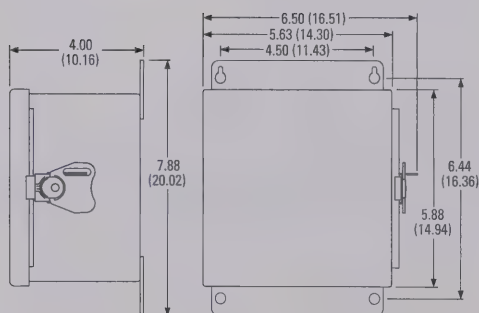
## MECHANICAL

Cable Entry  
Latch  
with padlock (not supplied)

Hole plugs for 0.75-inch (1.9 cm) conduit  
Stainless steel link-lock latch; can be secured with padlock (not supplied)



WCS1-4 POWER SUPPLY



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

## ELECTRICAL

Input Voltage	100/120/230 VAC, 50/60 Hz
WCS1-4	120 or 230 VAC, 50/60 Hz
WCS4-20/WCS4-20B	
Output Voltage	4/26/28 VAC
WCS1-4	4/28 VAC
WCS4-20/WCS4-20B	
Output Fuse/ Circuit Breaker Ratings	4 A* 8 A*
WCS1-4	
WCS4-20/WCS4-20B	
Input Connectors	Screw-type barrier strips
Output Connectors	Screw-type barrier strips; WCS4-20B is suitable for Class 2 wiring
Input Wire Size	12-16 gauge solid wire
Output Wire Size	
WCS1-4	16-20 gauge solid or stranded wire
WCS4-20/-20B	16-22 gauge solid or stranded wire

The following are the recommended maximum distances (transformer to load) and are calculated with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.) Distances are calculated in feet; values in parentheses are meters.

### Recommended Wiring Distance Chart

Input Voltage	Total VA Consumed	Wire Gauge					
		20 AWG (0.5 mm <sup>2</sup> )		18 AWG (1.0 mm <sup>2</sup> )		16 AWG (1.5 mm <sup>2</sup> )	
24 VAC	25	113	(34)	180	(55)	287	(87)
	50	56	(17)	90	(27)	143	(43)
	70	41	(12)	64	(19)	102	(31)
26 VAC	25	133	(40)	212	(64)	337	(103)
	50	66	(20)	105	(32)	168	(51)
	70	49	(15)	78	(24)	124	(38)
28 VAC	25	155	(47)	246	(75)	392	(119)
	50	77	(23)	122	(37)	195	(59)
	70	55	(17)	88	(27)	135	(41)

## GENERAL

Environment	Outdoor
Construction	Aluminum
Finish	Gray polyester powder coat
Unit Weight	
WCS1-4	6.4 lb (2.9 kg)
WCS4-20/4-20B	16.2 lb (7.3 kg)
Shipping Weight	
WCS1-4	8 lb (3.6 kg)
WCS4-20/4-20B	18 lb (8.1 kg)

## CERTIFICATIONS/RATINGS

- CE
- UL Listed
- UL Listed to Canadian safety standards
- Meets NEMA Type 4X and IP66 standards

\*Individual output cannot exceed this rating, and the total of all outputs cannot exceed the overall rating of the power supply (see the Models section).

Indicates change or addition.



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# TF Series Power Supply

## SINGLE 24 VAC CAMERA POWER SUPPLY, INDOOR

### Product Features

- Cost Effective
- 20 or 50 VA Output
- Fuse Protection
- UL Listed, Class 2 Power Supply

The **TF Series Power Supply** is a 24 VAC, Class 2 power supply that is ideal for use in fixed camera applications.

To meet different installation requirements, two models are available. The **TF2000** provides 20 VA output and the **TF9000** provides 50 VA output.

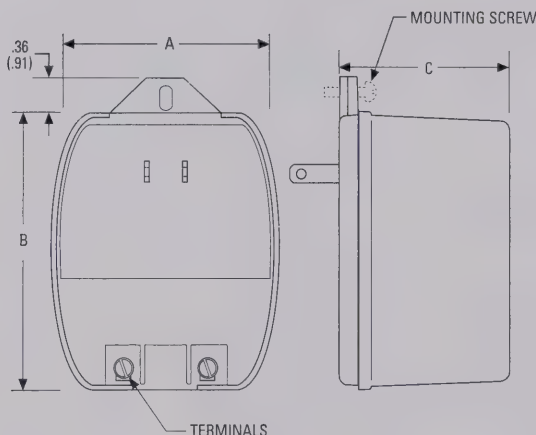
These economical power supplies, which are for indoor use only, plug into any 120 VAC duplex wall receptacle having a center screw. A mounting screw in the top of the power supply replaces the screw in the center of the receptacle cover to fasten the power supply securely to the receptacle.

Two screw terminals on the power supply provide easy connection of the 24 VAC output to one or more cameras.

A fuse inside the sealed unit provides protection against power supply or camera failure.



TF2000



MODEL	A	B	C
TF2000	2.36 (5.99)	2.98 (7.57)	1.91 (4.85)
TF9000	2.75 (6.99)	3.10 (7.88)	2.20 (5.59)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2656  
MANUAL: Not Available through DataFAX

C656 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

TF2000	Indoor, camera power supply, 120 VAC input. One fused, 24 VAC output, 20 VA
TF9000	Same as TF2000 except 50 VA output

## ELECTRICAL

Input Voltage	120 VAC, 60 Hz
Output Voltage	24 VAC
Output Power	
TF2000	20 VA
TF9000	50 VA
Overload Protection	Internal fuse (non-serviceable)
Input Connectors	Two blades
Output Connectors	Two screw terminals
Recommended	
Wiring Distances	See chart below

The following are the recommended maximum distances (transformer to load) and are calculated with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.) Distances are calculated in feet; values in parentheses are meters.

**Recommended Wiring Distance Chart**

Input Voltage	Total VA Consumed	Wire Gauge					
		20 AWG (0.5 mm <sup>2</sup> )		18 AWG (1.0 mm <sup>2</sup> )		16 AWG (1.5 mm <sup>2</sup> )	
24 VAC	10	283	(86)	451	(137)	716	(218)
	20	141	(42)	225	(68)	358	(109)
	50	56	(17)	90	(27)	143	(43)

## GENERAL

Construction	Plastic
Finish	Beige
Environment	Indoor
Unit Weight	
TF2000	0.80 lb (0.36 kg)
TF9000	1.70 lb (0.76 kg)
Shipping Weight	
TF2000	1 lb (0.45 kg)
TF9000	2 lb (0.91 kg)

## CERTIFICATIONS

- UL Listed



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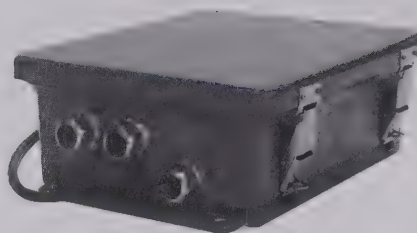
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## RB115/RB220/RB24 Control REMOTE RELAY BOX, SCANNERS, AND PAN/TILTS

### Product Features

- Simple Installation
- Use with 24 VAC Controls and 120/230/24 VAC Pan/Tilts or Scanners
- Indoor/Outdoor Applications
- Extends Operating Distances (Control to Relay Box)
- Long-Life Relays and Solid-State Circuitry
- Reliable, Trouble-Free Operation
- Can be Mounted to a Pole When Used with PA9000 Adapter and PA102 Mount

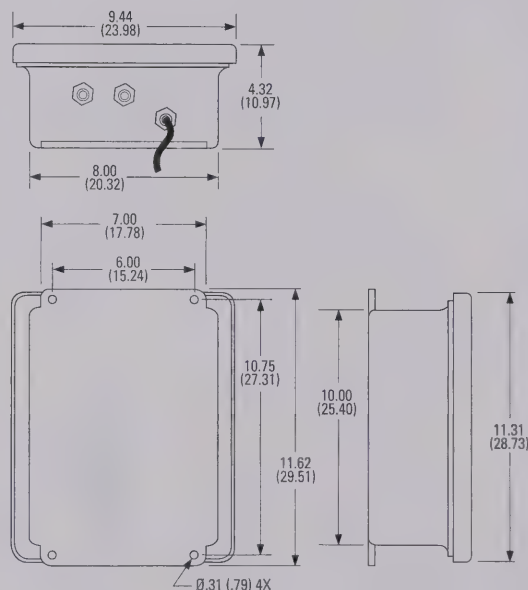


RELAY BOX

The **RB115**, **RB220**, and **RB24** remote relay boxes were designed as a simple, economical method of increasing the operating distance between the control unit and the pan/tilt or scanner. Installing a relay box between the control and the pan/tilt or scanner extends the effective operating distance (control to relay box) up to a maximum of 13,000 feet (3,962 m) utilizing 16 AWG (or equivalent, such as 1.5 mm<sup>2</sup>). A relay box also reduces installation costs by permitting the use of smaller gauge wire, which is more cost effective. In addition, the **RB115**, **RB220** and **RB24** were engineered to reduce costs throughout the life of the installation. The combination of solid-state circuitry and long-life relays plus rugged weatherproof construction insures reliable, trouble-free operation.

Clearly marked terminal block connections make installation easy, even for inexperienced installers. The terminal block is accessed through adjustable weatherproof cable glands and will accept either stripped wire or lugs — no special connectors are required.

All relay boxes are designed for use with 24 VAC controls (only) and a pan/tilt or scanner. The **RB115** is for use with 120 VAC pan/tilts or scanners, the **RB220** is for use with 230 VAC pan/tilts or scanners, and the **RB24** is for use with 24 VAC pan/tilts or scanners.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2915  
MANUAL: 29156

C915 / REVISED 10-03



International Organization  
for Standardization  
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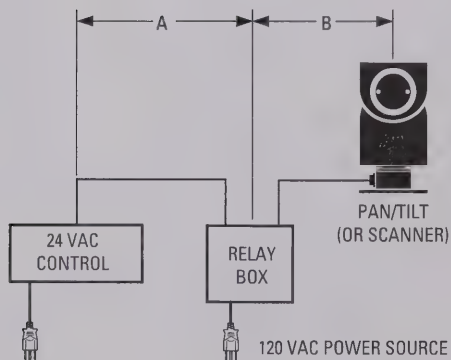


## MODELS

RB115	Remote relay box for 120 VAC pan/tilts and scanners
RB220	Remote relay box for 230 VAC pan/tilts and scanners
RB24	Remote relay box for 24 VAC pan/tilts and scanners

## ELECTRICAL

Control Input Voltage	24 VAC
Output Voltage to Pan/Tilt	
RB115	120 VAC
RB24	24 VAC
RB220	230 VAC
Line Voltage	120 VAC, 50/60 Hz 230 VAC, 50/60 Hz for RB24/220
Relays	REL1.5ASSR series Current surge 71 A Built-in zero cross
Fuse	
RB115	3 AG, 2 ASB
RB24	3 AG, 1 ASB
RB220	3 AG, 1 ASB
Operating Distances	The distances specified below are from the control to the relay box:
	22 AWG*      3,600 feet (0.3 mm <sup>2</sup> )      (1,097 m)
	20 AWG*      5,800 feet (0.5 mm <sup>2</sup> )      (1,768 m)
	18 AWG      8,250 feet (1.0 mm <sup>2</sup> )      (2,515 m)
	16 AWG      13,000 feet (1.5 mm <sup>2</sup> )      (3,962 m)
	*Not recommended for reliable service.



WHERE: "A" IS THE DISTANCE FROM THE CONTROL TO THE RELAY BOX.

"B" IS THE DISTANCE FROM THE RELAY BOX TO THE PAN/TILT OR SCANNER. REFER TO SPECIFICATION SHEET FOR THE PAN/TILT OR SCANNER YOU ARE USING TO OBTAIN THESE CABLE DISTANCES.

## GENERAL

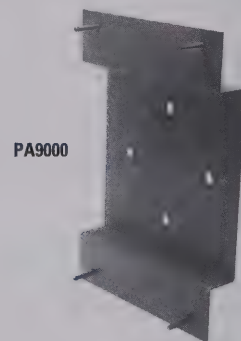
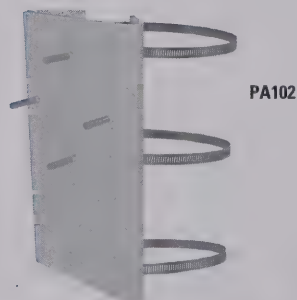
Enclosure Construction	UL listed gray industrial control panel enclosure
Weatherproofing	Cover and connectors fully gasketed
Weight	
RB115, RB220	6 lb 8 oz. (2.93 kg)
RB24	8 lb 11 oz. (3.91 kg)
Shipping Weight	
RB115, RB220	8 lb (3.62 kg)
RB24	10 lb (4.53 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (RB24/220 only)
- Meets NEMA Type 4X standards

## RELATED PRODUCTS

PA9000	Pole mount adapter for relay box
PA102	Pole mount. Supplied with stainless steel mounting straps. Must be used with PA9000 adapter



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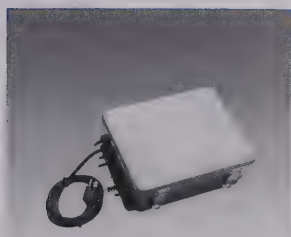
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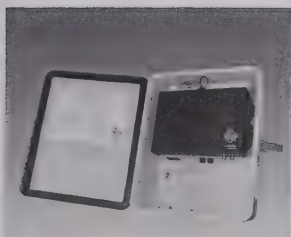


## RECEIVERS

### Legacy®, Coaxitron®, and P Protocol

#### Legacy® Receivers

Pelco's Legacy® Series receivers are compatible with Coaxitron® control systems and/or Pelco RS-422 control systems utilizing D or P type protocols. The units have a three-wire power connection with an on/off switch that supplies power to the entire system. Choose from fixed or variable speed models, with or without presets, for 24/120/230 VAC applications.

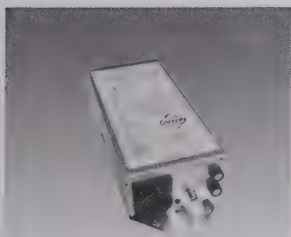


#### Coaxitron® Receivers

Pelco's Coaxitron stand-alone receivers are capable of operating fixed speed pan/tilts and domes. Receivers control pan/tilt and zoom functions by transmitting control and video information on the same coax cable. Models are available with standard and/or extended Coaxitron® controller compatibility.

#### P-Protocol Receivers

Pelco's ERD97P21-U is a stand-alone receiver capable of controlling pan/tilt, camera and lens functions. The unit is designed for systems that transmit Pelco P protocol. Standard features include 80 presets, frame scan, and random scan.



Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Receiver Selection Guide

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# Receiver Selection Guide

Features		Model	Input Voltage	Camera Output Voltage	Lens Output Voltage	Pan/Tilt Output Voltage	Enclosure Output Voltage	See Page	
Coaxitron Receiver	Indoor	Fixed Speed, No Presets	IRD2024	24 VAC	24 VAC	8 VDC	24 VAC	Customer Supplied	333
	Outdoor	Fixed Speed, No Presets	ERD2200	120/230 VAC	24 VAC	8 VDC	24/120/230 VAC	120/230 VAC	333
		Fixed Speed, with Presets	CX9024RX-PP	24 VAC	24 VAC	8 VDC	24 VAC	Customer Supplied	335
			CX9024RX-PP220	230 VAC	24 VAC	8 VDC	24 VAC	Customer Supplied	335
			CX9115RX-PP	120 VAC	120 VAC	8 VDC	120 VAC	Customer Supplied	335
RS-422 ("P") Receiver	Outdoor	Fixed Speed, with Presets	CX9220RX-PP	230 VAC	230 VAC	8 VDC	230 VAC	Customer Supplied	335
			ERD97P21-U	24/120/230 VAC	24/120/230 VAC	24/120/230 VAC*	24/120/230 VAC*	24/120/230 VAC (Same as input)	337

\* No voltage step-up possible; 230 VAC input can not step down to 120 VAC.

For selection of Legacy® receivers, refer to the *Legacy Pan/Tilt System Selection Guide* on page 214.

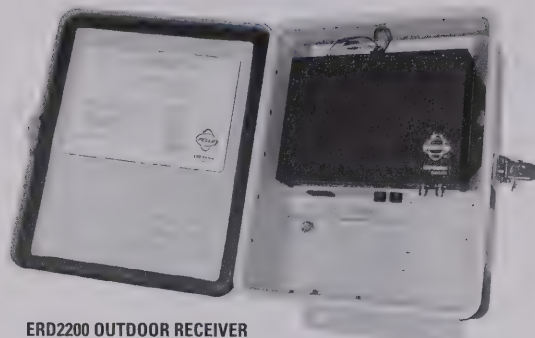


## IRD/ERD2000 Series Receiver

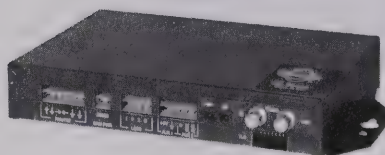
### COAXITRON® COMPATIBLE, FIXED SPEED

#### Product Features

- Indoor/Outdoor Models
- Coaxitron® Compatible, Fixed Speed
- Pan/Tilt Control, Including Auto and Random Scan
- Lens Control (Zoom, Focus, Iris)
- Camera Power (24 VAC)
- Enclosure Power (Outdoor Model Only)
- Two Auxiliary Outputs
- NTSC or PAL Video
- Test Local Control Capability
- Ground Isolated BNCs (Eliminates Ground Loops)
- Video Transient Protection
- Power and Communication Indicator LEDs
- Lockable Enclosure (Outdoor Model Only)



ERD2200 OUTDOOR RECEIVER



IRD2024 INDOOR RECEIVER

The **IRD/ERD2000 Series** receiver operates all of Pelco's fixed speed pan/tilts and domes. It replaces the non-preset models in the CX9000RX/RXI Series receiver. This receiver offers removable screw terminal connectors for quick and easy installation. Power and communication indicators are provided for troubleshooting purposes.

The **IRD/ERD2000 Series** works with standard and extended Coaxitron controllers, including the CM6700/6800/9500, KBD9000, MPT9000/9500, and MX4000. With Coaxitron control, pan/tilt and lens control signals are transmitted over the video coaxial cable, saving wiring costs. The control data is superimposed on the vertical blanking interval of the video signal.

Standard features include pan/tilt control (including auto and random scan), camera power, lens control (zoom, iris, and focus), and two auxiliary outputs. The receiver also can be used with the LRD41TLC test local control module, which allows on-site testing and troubleshooting of system functions. The TLC module plugs into the receiver and operates off the receiver's power. Use the TLC to check pan/tilt functions (up, down, left, and right), iris open/close, focus near/far, and zoom telephoto/wide angle.

The indoor model accepts 24 VAC input and provides 24 VAC output for camera power and pan/tilt operation. Simplicity of design allows the indoor unit to be installed in a weatherproof housing to create the outdoor model. The outdoor model accepts either 120 or 230 VAC input. It supplies 24 VAC for camera power, 24, 120, or 230 VAC for pan/tilt operation, and 120 or 230 VAC for heater, blower, or defroster accessories inside the camera enclosure.



**DataFAX**  
SPEC: 21506  
MANUAL: 215066

C1506 / REVISED 10-03

IP66



International Organization  
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Registered ISO 9001



## MODELS

IRD2024	Indoor, fixed speed, Coaxitron receiver, 24 VAC input, 24 VAC output for camera power and pan/tilt operation
ERD2200	Outdoor, fixed speed, Coaxitron receiver, 120/230 VAC input, 24 VAC output for camera power, 24, 120, or 230 VAC output for pan/tilt operation, and 120 or 230 VAC output for enclosure accessories

## MECHANICAL

Connectors	
Video	BNC
Pan/Tilt	Screw terminals
Camera and Lens	Screw terminals
Power Connectors	Screw terminals
Cable Entry	
IRD2200	Openings for .75-inch (1.9 cm) conduit

## ELECTRICAL

Input Voltage	
IRD2024	24 VAC, 50/60 Hz
ERD2200	120/230 VAC, 50/60 Hz
Output Voltage	
IRD2024	
Camera, Pan/Tilt	24 VAC
Lens	8 VDC
ERD2200	
Camera	24 VAC
Lens	8 VDC
Pan/Tilt	24/120/230 VAC
Enclosure	120/230 VAC
Power Consumption	
IRD2024	45 VA maximum
ERD2200	90 VA maximum
Video Input/Output	75 ohms
Video Bandwidth	10 MHz
Video Gain	Unity
Video Formats	NTSC or PAL
Control Method	Standard or extended Coaxitron
Auxiliary Outputs	
AUX 1	One open collector, TTL 5 VDC, 15-20 mA (used for wiper or low current relays)
AUX2	One Form C relay output (N.O./N.C.) 1 A at 24 VDC or 0.5 A at 120 VAC
Operating Distance	Cable distances are approximate according to cable type used. 75-ohm coax required.

Cable Type	Distance	Distance Using EA2000
RG59/U	750 ft (229 m)	3,000 ft (914.4 m)
RG6/U	1,000 ft (309 m)	4,500 ft (1,371.6 m)
RG11/U	1,500 ft (457 m)	6,000 ft (1,828.8 m)
RG15/U	—	8,000 ft (2,483.4 m)

## GENERAL

Environment	
IRD2024	Indoor
ERD2200	Outdoor
Construction	
IRD2024	Aluminum
ERD2200	Aluminum (receiver), steel (housing)
Finish	
IRD2024	Black polyester powder coat
ERD2200	Gray polyester powder coat
Operating Temperature	
IRD2024	-10° to 122°F (-23° to 50°C)
ERD2200	-50° to 122°F (-46° to 50°C)
Dimensions	
IRD2024	10.3" L x 6.0" W x 1.75" H (26.2 x 15.2 x 4.4 cm)
ERD2200	15.2" L x 12.2" W x 5.0" H (38.6 x 31.0 x 12.7 cm)
Unit Weight	
IRD2024	1.25 lb (0.5 kg)
ERD2200	9.90 lb (4.5 kg)
Shipping Weight	
IRD2024	3 lb (1.3 kg)
ERD2200	13 lb (5.8 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- Meets NEMA Type 1, IP10 standards (IRD2024); NEMA Type 4, IP66 standards (ERD2200)

## OPTIONAL ACCESSORIES

LRD41TLC	Test local control module. Receiver plug-in module for on-site testing of system functions
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## RECOMMENDED POWER SUPPLIES

MCS Series	Indoor power supply, 24 VAC output. Recommended for use with IRD2024.
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## CX9000 Series Receiver

**COAXITRON® COMPATIBLE, PRESET POSITIONING, OUTDOOR**

### Product Features

- Coaxitron Compatible, Fixed Speed
- Pan/Tilt Control
- Lens Control (Zoom, Focus, Iris)
- Preset Positioning
- Camera and Pan/Tilt Power
- NTSC or PAL Video



**CX9024RX-PP RECEIVER**

The **CX9000 Series** Coaxitron® receiver operates all of Pelco's fixed speed pan/tilts and domes with preset positioning. For pan/tilts and domes without preset positioning, refer to the IRD/ERD2000 Series receiver.

Standard features include pan/tilt control, camera power, lens control (zoom, focus, and iris), preset positioning, and an open collector transistor (latching) output for manual override of an automatic iris control. Depending on the model, input voltage is either 120 or 230 VAC, and output voltage for camera and pan/tilt power can be either 24, 120, or 230 VAC.

The **CX9000 Series** receiver works with the following Coaxitron controllers: CM6700, CM6800, CM9500, MPT9500, MX4000, CM9740, and CM9760. The CM9740 and CM9760 require a CM9760-CXT Coaxitron translator. With Coaxitron control, pan/tilt and lens control signals are transmitted from the controller to the receiver over the video coaxial cable, saving wiring costs. The control data is superimposed on the vertical blanking interval of the video signal.

Also available is the test local control (CX900TLC) module which allows on-site testing of system functions. Just plug the TLC module into the connector on the receiver and you are ready to test the system functions. The TLC module operates on +10 VDC supplied by the receiver and controls these functions: iris open/iris close, focus near/focus far, zoom telephoto/zoom wide, tilt up/tilt down, pan

left/pan right, automatic iris operation with manual override (using A1701), and auto/manual scan.

All models are rated for outdoor use. The receiver circuitry is installed in a sturdy fiberglass box with door latches that can be padlocked. The box includes four mounting holes for attaching the receiver to a wall or to a pole mount. All wiring enters through connectors on the bottom of the box to keep out water.



**DataFAX**  
**SPEC:** 2554  
**MANUAL:** 25546

C554 / REVISED 10-03



International Organization  
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## MODELS

CX9024RX-PP	Outdoor, fixed speed, Coaxitron receiver, 120 VAC input, 24 VAC output for camera power and pan/tilt operation
CX9024RX-PP220	Outdoor, fixed speed, Coaxitron receiver, 230 VAC input, 24 VAC output for camera power and pan/tilt operation
CX9115RX-PP	Outdoor, fixed speed, Coaxitron receiver, 120 VAC input, 120 VAC output for camera power and pan/tilt operation
CX9220RX-PP	Outdoor, fixed speed, Coaxitron receiver, 230 VAC input, 230 VAC output for camera power and pan/tilt operation

## ELECTRICAL

Input Voltage	
CX9024RX-PP	120 VAC, 60 Hz
CX9115RX-PP	120 VAC, 60 Hz
CX9024RX-PP220	230 VAC, 50 Hz
CX9220RX-PP	230 VAC, 50 Hz
Output Voltage	
(Camera, Pan/Tilt)	
CX9024RX-PP	24 VAC
CX9024RX-PP220	24 VAC
CX9115RX-PP	120 VAC
CX9220RX-PP	230 VAC
Power Consumption	
Receiver	5 VA (120 VAC or 24 VAC)
Pan/Tilt Supply	140 VA maximum (120 VAC) 50 VA maximum (24 VAC)
Lens Supply	0-4 VA maximum
Camera Supply	15 VA (typical)
Control Method	Standard Coaxitron
Connectors	Two BNC connectors for video input and output One 37-pin AMP CPC for control output (mate supplied)
Input Video Level	1 Vp-p nominal; 2 Vp-p maximum at less than 75 percent APL; 1.5 Vp-p maximum at 90 percent APL
System Bandwidth	Less than 2 dB down at 10 MHz (exclusive of cable)
Fuse Protection	3 AG type
Power Cord	3-wire grounded, 18 AWG
Operating Distance	Cable distances are approximate according to the cable type used. 75-ohm coax required.

Cable Type	Distance	Distance Using EA2000
RG59/U	750 ft (229 m)	3,000 ft (914.4 m)
RG6/U	1,000 ft (305 m)	4,500 ft (1,371.6 m)
RG11/U	1,500 ft (457 m)	6,000 ft (1,828.8 m)
RG15/U	—	8,000 ft (2,483.4 m)

## GENERAL

Operating Temperature	-4° to +140°F (-20° to +60°C)
Construction and Finish	Dark gray fiberglass
Latches	Two latches (accommodates padlocks; not supplied)
Dimensions	11.62" L x 9.44" W x 4.32" H (29.51 x 23.98 x 10.97 cm)
Unit Weight	6 lb (2.72 kg)
Shipping Weight	8 lb (3.63 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (CX9024RX-PP220)
- UL Listed (CX9024RX-PP and CX9115RX-PP)
- FCC, Class B
- Meets NEMA Type 4X standards

## OPTIONAL ACCESSORIES

### Heater Kits

HKRX024	Heater kit for 24 VAC receivers, 40 watts. Allows operation to -40°F (-40°C).
HKRX115	Same as HKRX024 except for use with 120 VAC receivers.

### Mounts

PA9000	Pole mount adapter.
PA102	Pole mount. Must be used with PA9000 adapter.

### Other

CM9760-CXT	Coaxitron translator to interface CX9000 Series receiver with CM9740/CM9760 Series Matrix.
CX900TLC	Receiver plug-in module for testing control functions
EA2000	Half-duplex equalizing amplifier.



PA102



PA9000

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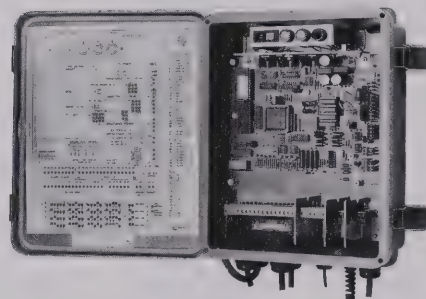
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## ERD97P21-U Receiver

### RS-422, P PROTOCOL RECEIVER

#### Product Features

- Easy to Install
- Standard Features Include:
  - 80 Presets
  - Frame Scan
  - Random Scan
- RS-422, P Protocol for Pan/Tilts, Including Legacy®
- Environmental Housing Meets NEMA Type 4X Standards
- Input Power, Pan/Tilt Power, and Camera Power Selectable via Tool-Less Plug-Ins
- Adjustable Lens Voltage
- LED Indicators for Power and Transmit/Receive Data
- Standard Single Alarm Input (9 with Option Board)
- Standard Single Alarm Output (9 Auxiliary Outputs with Option Board)
- Auxiliary Outputs Jumper-Selectable for Normally-Open or Normally-Closed Operation
- Address Selectable
- Data Rate Selectable



RECEIVERS,  
RS-422, P PROTOCOL

The **ERD97P21-U** receiver is a stand-alone unit capable of controlling pan/tilt, camera, and lens functions and is designed to be used with systems that transmit Pelco P protocol. Standard features include 80 presets, frame scan, and random scan.

The **ERD97P21-U** is unique in that input voltage, pan/tilt voltage and camera voltage are set internally for 24/120/230 VAC using labeled plug-in connectors. Enclosure voltage is always the same as the input voltage to the receiver. All units are factory configured for 120 VAC input and 24 VAC camera voltage and are shipped with an attached 120 VAC cable. All connections to the motherboard and option board are made through easy-to-use terminal blocks with screw terminals.



**DataFAX**  
**SPEC:** 2571  
**MANUAL:** 29396

C571 / REVISED 6-01

International Organization  
for Standardization,  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

ERD97P21-U

Receiver. Provides interface with pan/tilt devices that transmit Pelco P protocol and use 24/120/230 VAC. Supports up to 80 presets; has one relay output.

## RELATED PRODUCT

ERD97P-AUX

Alarm/relay option board

## ELECTRICAL

Input Voltage	24 VAC, 120 VAC, or 230 VAC, 50/60 Hz (selectable)
Pan/Tilt Output Voltage	24 VAC (2A maximum), 120 VAC or 230 VAC (selectable); no voltage step-up possible; 230 VAC input cannot step down to 120 VAC
Lens Output Voltage	5-10 VDC; 25 mA at 10 VDC and 100 mA at 9 VDC
Camera Voltage	24 VAC (0.5 mA), 120 VAC or 230 VAC (selectable); no voltage step-up possible; 230 VAC input cannot step down to 120 VAC
Enclosure Voltage	Follows input voltage to receiver, fused
Power Consumption	
Pan/Tilt	48 VA
Camera	12 VA
Lens	5 VA
Receiver	15 VA
Control Method	RS-422 compatible (at 1200, 2400, 4800, 9600 baud). Receiver address and baud rate DIP switch selectable
Operating Distance	5,000 feet (1.5 km) on 18 AWG wire (Belden 8760)
Fuse Protection	
Receiver Input Power	3 AG type; 24 VAC - 5 ASB 120 VAC - 2 ASB 230 VAC - 1 ASB
Camera Power	3 AG type; 24 VAC - 1 A 120 VAC - 0.2 A 230 VAC - 0.0625 A
Enclosure Power	3 AG type; Fuse values depend on specifications of the equipment/accessories installed in enclosure. Check equipment specifications to determine fuse values
Alarm Inputs	Main motherboard has 1 normally-open alarm input (2 contacts: 1 in, 1 common). Option board has 8 additional normally-open alarm inputs (9 contacts: 8 in, 1 common). Contact rating: 1 A at 24 VDC, 0.5 A at 120 VAC
Relay Outputs	Main motherboard has 1 relay output. Option board has 8 additional relay outputs which are under receiver control. Contact rating: 1 A at 24 VDC, 0.5 A at 120 VAC
LED Indicators	Power, TX data, RX data

## GENERAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Dimensions	9.44" W x 4.32" H x 11.62" D (23.98 x 10.97 x 29.51 cm)
Unit Weight	12 lb (5.43 kg)
Shipping Weight	13 lb (5.89 kg)

## CERTIFICATIONS/RATINGS

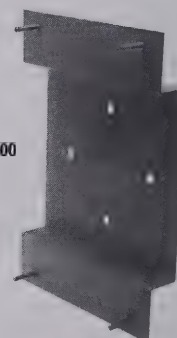
- Meets NEMA Type 4X standards

## OPTIONAL MOUNTS

PA9000	Pole mount adapter for outdoor receiver
PA102	Pole mount. Must be used with PA9000 adapter.



PA102



PA9000



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# LRD41A11 Series Receiver

COAXITRON® COMPATIBLE, FOR LEGACY® SYSTEMS

## Product Features

- Fixed Speed Only
- Coaxitron® Compatible
- Adjustable Lens Voltages (6 to 10 VDC)
- Selectable Camera Power
- Control Without Video
- Gen Lock Accessibility
- Transient Suppression
- Auto/Random Scan
- NTSC or PAL Video
- Test Local Control Capability
- For Use with Legacy® LWM41 Wall Mount



LEGACY WALL MOUNT WITH  
INTEGRAL RECEIVER

The **LRD41A11 Series** are Legacy® system fixed speed receivers available in 24, 120 or 230 VAC models to fit your application needs.

Standard features include pan/tilt control, camera power, zoom lens control (zoom, iris, and focus), wiper control, and auto/manual scan.

The **LRD41A11 Series** receiver is designed for use with our LWM41 wall mount and is compatible with fixed speed Legacy pan/tilt models PT780P, PT780SL, PT780-24P, and PT780-24SL.

The **LRD41A11 Series** receiver is compatible with Coaxitron® control systems utilizing the standard 15-bit command protocol. These include the MX4000, MPT9000, MPT9500, CM6700, CM6800, CM9500, CM9740, and CM9760. (The CM9740 and CM9760 are interfaced using the CM9760-CXT Coaxitron Translator.)

For preset or variable speed capability, see LRD41C21 or LRD41C22 Series receivers.

Also available is the test local control (LRD41TLC) module which allows on-site testing of Legacy system functions. Just plug the TLC module into the connector on the receiver and you're ready to test the system's functions. The TLC module operates on +5 VDC supplied by the receiver and controls these functions: iris open/iris close, focus near/focus far, zoom telephoto/zoom wide, tilt up/tilt down, and pan left/pan right.



LEGACY LRD41A11 RECEIVER  
SHOWN WITH LRD41TLC TEST LOCAL CONTROL

RECEIVERS,  
LEGACY FIXED SPEED



DataFAX  
SPEC: 2553  
MANUAL: 25536

C553 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

LRD41A11-1	Legacy fixed speed receiver. 120 VAC input. Use with Legacy LWM41 wall mount.
LRD41A11-2	Same as LRD41A11-1 except 24 VAC input
LRD41A11-3	Same as LRD41A11-1 except 230 VAC input

## RELATED PRODUCTS

MPT9000 Series	Desktop Coaxitron transmitter/control.
MPT9500 Series	Desktop transmitter/control for standard or extended Coaxitron receivers.
Coaxitron Matrix	Coaxitron Matrix, System 6700, 6800, 9500, 9740 or 9760 controls. <i>Refer to individual matrix spec sheets for additional information.</i>

## MECHANICAL

Video Connectors	BNC
Pan/Tilt Connector	37-pin CPC
Power Connector	Plastic interlocking (female)

## ELECTRICAL

Input Voltage	See table below
---------------	-----------------

### LRD41A11-1

Input Voltage:	120 VAC
P/T Voltage:	120 VAC
Camera Voltage:	24 VAC or 120 VAC (selectable)
Enclosure Voltage:	120 VAC

### LRD41A11-2

Input Voltage:	24 VAC
P/T Voltage:	24 VAC
Camera Voltage:	24 VAC
Enclosure Voltage:	24 VAC

### LRD41A11-3

Input Voltage:	230 VAC
P/T Voltage:	120 VAC
Camera Voltage:	24 VAC or 230 VAC (selectable)
Enclosure Voltage:	230 VAC

Frequency	60/50 Hz
Power Consumption	5 VA
Video Input	75 ohms terminating
Video Output	75 ohms terminating
Video Bandwidth	10 MHz
Video Gain	Unity
Video Formats	NTSC or PAL

Control Method	Coaxitron, 15-bit protocol
Lens Output Voltage	6 VDC to 10 VDC
Current	25 mA at 10 VDC, 100 mA at 9VDC
Operating Distances	Cable distances are approximate according to cable type used. 75 ohm coax required.

Cable Type	Distance	Distance Using EA2000
RG59/U	750 ft (229 m)	3,000 ft (914 m)
RG6/U	1,000 ft (305 m)	4,500 ft (1,372 m)
RG11/U	1,500 ft (457 m)	6,000 ft (1,829 m)
RG15/U	—	8,000 ft (2,438 m)

Fuse Values	F1 LRD/PANTILT	F2 ENCLOSURE
LRD41A11-1	2 amp	2 amp
LRD41A11-2	5 amp	6.3 amp
LRD41A11-3	1 amp	1 amp

## GENERAL

Operating Temperature	0° to 120°F (-17° to 49°C)
Finish	Alodine
Dimensions	11.5" L x 4.5" W x 2.75" H (29.2 x 11.4 x 6.98 cm)
Unit Weight	
LRD41A11-1	3.80 lb (1.72 kg)
LRD41A11-2	2.44 lb (1.11 kg)
LRD41A11-3	4.31 lb (1.95 kg)
LWM41	9.50 lb (4.31 kg)
Shipping Weight	
LRD41A11-1	6 lb (2.71 kg)
LRD41A11-2	4 lb (1.81 kg)
LRD41A11-3	6 lb (2.71 kg)
LWM41†	2 lb (5.43 kg)

## CERTIFICATIONS

- CE, Class A (LRD41A11-2 and LRD41A11-3)
- FCC, Class A (LRD41A11-1 and LRD41A11-2)
- Meets NEMA Type 4 standards (when installed in the LWM41 wall mount)

## OPTIONS

LRD41TLC	Test Local Control module. Receiver plug-in module for on-site testing of Legacy system functions.
LWM41	Legacy wall mount.
CM9760-CXT	Coaxitron Translator; used to interface the CM9740 and CM9760 Matrix with LRD41A11 Series receivers.

Indicates change or addition.



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## LRD41C21/LRD41C22 Series Receiver

### COAXITRON®/RS-422 COMPATIBLE, FOR LEGACY® SYSTEMS

#### Product Features

- 64 Presets
- Fixed Speed or Full PTZ Variable Speed Control Models Available
- 8 Inputs for Preset Alarms\*
- 1 Alarm Output\*
- 2 Relay Outputs: Aux 1 and Aux 2\*
- Self-Test Diagnostics
- Auto/Random Scan
- Camera Synchronization
- Serial Com Port (RS-422)
- Coaxitron® Compatible
- Transient Suppression
- NTSC or PAL Video
- Test Local Control Capability
- Adjustable Lens Voltages
- For Use with Legacy® LWM41 Wall Mount

The **LRD41C21/LRD41C22 Series** Legacy® receiver is designed for use with our LWM41 wall mount. Standard features include 64 presets, 8 inputs for preset alarms\*, and 1 alarm output. Choose from fixed speed or variable speed models for 24/120/230 VAC applications.

The **LRD41C21 Series** receiver is for use with fixed speed Legacy pan/tilt models PT780P, PT780P/PP, PT780SL, PT780SL/PP, PT780-24P, PT780-24P/PP, PT780-24SL, and PT780-24SL/PP. The **LRD41C22 Series** receiver is for use with variable speed pan/tilt models PT780-VS, PT780-VSSL, PT780-VS/PP, and PT780-VSSL/PP.

The **LRD41C21/LRD41C22 Series** is compatible with either Coaxitron® control systems utilizing standard 15-bit or extended 32-bit command protocols or Pelco serial RS-422 control systems utilizing D- or P-type protocols.

Also available is the **LRD41TLC** test local control module which allows on-site testing of Legacy system functions. Simply plug the TLC into the connector on the receiver and you're ready to test the system functions. The TLC module operates on +5 VDC supplied by the receiver and controls these functions: iris open/iris close, focus near/focus far, zoom telephoto/zoom wide, tilt up/tilt down, and pan left/pan right.

\* Requires optional LRD41C-CONNKIT



LEGACY WALL MOUNT WITH  
INTEGRAL RECEIVER



LEGACY LRD41A11 RECEIVER  
SHOWN WITH LRD41TLC TEST LOCAL CONTROL MODULE



DataFAX  
SPEC: 2557  
MANUAL: 25576

C557 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

LRD41C21-1	Legacy fixed speed receiver with up to 64 presets, 120 VAC input. Use with LWM41 Legacy wall mount
LRD41C21-2	Same as LRD41C21-1 except 24 VAC input
LRD41C21-3	Same as LRD41C21-1 except 230 VAC input
LRD41C22-1	Legacy variable speed receiver with up to 64 presets, 120 VAC input. Use with LWM41 Legacy wall mount
LRD41C22-2	Same as LRD41C22-1 except 24 VAC input
LRD41C22-3	Same as LRD41C22-1 except 230 VAC input

## MECHANICAL

RS-422 Connector	4-position connector
Aux/Alarm Connector	18-position double-stack header for interface. Aux/Alarm mating connectors not supplied (see <i>OPTIONAL ACCESSORIES</i> )

Video and Sync Connectors	BNC
Pan/Tilt Connector	37-pin connector
Power Connector	6-position (mating connector on switch bracket)

## ELECTRICAL

Input Voltage	See table below
---------------	-----------------

120V Models	LRD41C21-1	LRD41C22-1
Input	120 VAC	120 VAC
Pan/Tilt	120 VAC	12 VDC
Camera	24 VAC	24 VAC
Enclosure	120 VAC	120 VAC
24V Models	LRD41C21-2	LRD41C22-2
Input	24 VAC	24 VAC
Pan/Tilt	24 VAC	12 VDC
Camera	24 VAC	24 VAC
Enclosure	24 VAC	24 VAC
230V Models	LRD41C21-3	LRD41C22-3
Input	230 VAC	230 VAC
Pan/Tilt	120 VAC	12 VDC
Camera	24 VAC	24 VAC
Enclosure	230 VAC	230 VAC

Frequency	60/50 Hz
Video Input	75 ohms terminating
Video Output	75 ohms terminating
Video Bandwidth	10 MHz
Video Gain	Unity
Video Formats	NTSC or PAL
Control Method	Coaxitron, 15-bit and 32-bit protocols or 2-wire RS-422
Standard Baud Rate	
D-type Control	2400 baud only
P-type Control	2400/4800/9600 baud
Alarm In	GND to operate, +5V or open to disable
Alarm Out	One open collector, TTL 5 VDC, 15-25 mA
Aux 1 and 2 Relay	1 A at 24 VDC
Lens Output	
Voltage	6 VDC to 10 VDC
Current	25 mA at 10 VDC, 100 mA at 9 VDC

## Operating Distances

Coaxitron Version	
RS-422 Version	

Cable distances are approximate according to cable type used. 75-ohm coax required  
750 ft (229 m) on RG59/U  
4,000 ft (1,219 m) on 24 AWG twisted pair (for point-to-point and daisy-chain configurations only)

## Fuse Values

	F1 Input Power (LRD)	F2 Enclosure
LRD41C21-1	2A	2A
LRD41C21-2	2.5A	6.3A
LRD41C21-3	500 mA	1A
LRD41C22-1	400 mA	2A
LRD41C22-2	1.25A	6.3A
LRD41C22-3	160 mA	1A

**LRD Input Current Table**

Model	Receiver*	Enclosure/Accessories**
LRD41C21-1	500 mA	1.5 A
LRD41C21-2	2 A	6 A
LRD41C21-3	250 mA	900 mA
LRD41C22-1	200 mA	1.5 A
LRD41C22-2	1 A	6 A
LRD41C22-3	100 mA	900 mA

\* Current required to run the receiver, pan/tilt, camera, and lens.

\*\* Current required for maximum enclosure options (heaters, wiper, blower, defroster, and pan/tilt heater blankets).

## GENERAL

Operating Temperature	0° to 110°F (-18° to 43°C)
Case Dimensions	11.5" L x 4.5" W x 2.75" H (29.21 x 11.43 x 6.98 cm)
Finish	Alodine
Unit Weight	5 lb (2.27 kg)
Shipping Weight	6 lb (2.72 kg)

## CERTIFICATIONS

- CE, Class A (all models)
- FCC, Class A (all except 230 VAC models)

## OPTIONAL ACCESSORIES

LRD41TLC	Test local control module. Receiver plug-in module for on-site testing of Legacy system functions
LRD41C-CONNKIT	Two 9-pin connectors that interface with the 18-position double-stack Aux/Alarm connector on the receiver. Required to enable the Aux/Alarm capabilities of the receiver.
LWM41	Legacy wall mount.

Indicates change or addition.



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## VIDEO CONDITIONING

### Distributing/Amplifying the Video Signal

The video signal used in CCTV equipment is nominally a one-volt peak-to-peak signal and is impedance sensitive to 75 ohms for ideal video reproduction.

#### Distribution Amplifiers

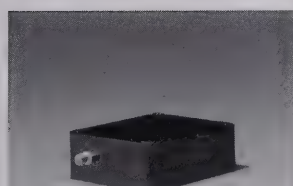
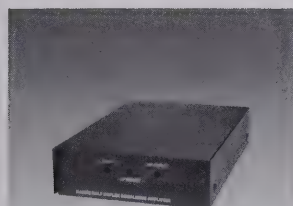
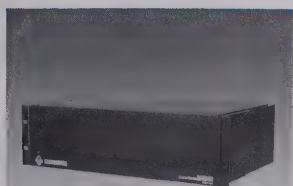
A distribution amplifier receives a video signal input and reproduces the same amplitude signal to multiple outputs. Pelco's CM9760-MDA master distribution amplifier has sixteen video inputs with four video outputs per input. The DA104DT video amplifier provides four independent video outputs from a single video input.

#### Equalizing Amplifiers

Pelco's EA2000 and EA2010 video amplifiers are low cost, effective ways of maintaining picture quality in runs up to 3,000 feet (914 m). Equalizing amplifiers boost a weak input signal to a one-volt peak-to-peak output signal, improving overall picture quality.

#### Ground Isolation Transformer

Pelco's GIT100 ground isolation transformer is an effective solution to ground loop problems. A ground loop problem may occur when there is a voltage potential between ground at a camera and ground at the head equipment location.



## NOTES



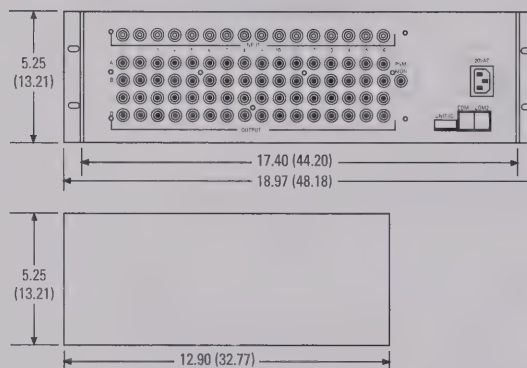
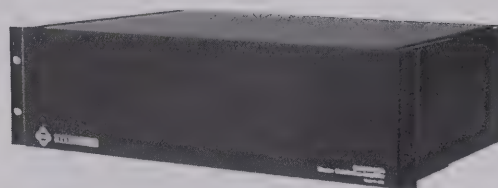


# CM9760-MDA Master Distribution Amplifier

## UNIVERSAL TIME-DATE GENERATOR AND TITLER

### Product Features

- Master Time-Date Titler
- Distribution Amplifier
- Accepts Master Time-Date Strings from 9740/9760/9770 Systems
- Stand-alone Use, with Keyboard Programming
- Provides Master Time-Date and Title for up to 63 Slave Units (64 Total Units)
- Accepts Text Messages (RS-232/RS-422) from Third-Party Systems for Insertion onto any Video Channel
- 16 Ground-Isolated Video Inputs per Unit
- 4 Video Outputs per Input
- Outputs Selectable for Time-Date Only, Time-Date and Title, or No Character Generation
- Includes Video Amplification
- Line Compensation
- Includes Easy-to-Use Windows® Programming Package



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

The **CM9760-MDA** is a master distribution amplifier that inserts time-date and a programmable title of up to 24 characters on 1-16 video signals. Each of the sixteen video inputs has four fully independent video outputs. Each video output is selectable to include or exclude time-date and title generation.

Each of the 16 video inputs is individually programmable. Programming includes individual camera titles and cable compensation for up to 1,500 feet (457 m) of RG59/U coaxial cable. Characters are adjustable horizontally and vertically on-screen with digital brightness control. Time-date information is common among all channels. All characters are white with black outline to provide maximum viewing efficiency in a variety of background conditions. All inputs are individually ground isolated to prevent ground loops.

The **CM9760-MDA** can act as a stand-alone time-date and title generator or can be synchronized to a 9740/9760/9770 system as a matrix time-date and title generator. As a stand-alone unit, the **CM9760-MDA** can be addressed to provide the master time-date for up to 63 slave units.

When connected to a 9740/9760/9770 system, multiple MDAs can have synchronized time-date with all 9740/9760/9770 system components. (The CM9760-CDU-T must be used when more than 16 MDAs are required.) The MDA supports RS-232, RS-422, and RS-485 communication on both input and output ports.

In addition, the **CM9760-MDA** can accept text messages via RS-232/RS-422 from third-party systems. A message can consist of up to 24 characters, and multiple messages can be displayed simultaneously on up to five display lines. The messages can be inserted onto any video channel independently.

A simple, easy-to-use Windows® program is provided for initial setup of camera titles and all other MDA features. The CM9760-KBD, KBD200A or KBD300A keyboard may be used instead of the Windows program for on-screen programming. Battery back-up protects programming information for a minimum of one year.

VIDEO CONDITIONING  
DISTRIBUTION AMPLIFIER



DataFAX  
SPEC: 2573  
MANUAL: Not Available through DataFAX

C573 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CM9760-MDA	Master Distribution Amplifier with Time-Date and Title, 120 VAC, 60 Hz
CM9760-MDA-X	Same as CM9760-MDA except 230 VAC, 50 Hz

## RELATED PRODUCTS

CM9760-CDU-T	Code Distribution Unit; 16-channel RS-422 transmit only (2-wire and ground). Required for use in configurations having more than sixteen CM9760-MDAs.
--------------	---

## ELECTRICAL

Input Voltage	
CM9760-MDA	120 VAC, 60 Hz
CM9760-MDA-X	230 VAC, 50 Hz
Power Consumption	25 W
Fuse	120 V: 250 mA 230 V: 125 mA

## MECHANICAL

Connectors	
Video Input	BNC (16)
Video Output	BNC (4 per input; 64 total)
Communications	
In	RJ-45
Out	RJ-45

## VIDEO

Video Input(s)	.5 to 2 Vp-p, 16 inputs per unit
Video Output(s)	1 Vp-p, 4 outputs per input
Input/Output Impedance	75 ohms, terminated
Gain	Unity $\pm 1$ dB
Frequency Response	$\pm 1$ dB at 8 MHz
Bandwidth	$\pm 3$ dB at 15 MHz
Crosstalk	-60 dB at 3.58 MHz
Gain	+88 dB +55 dB with 1,500 feet RG59/U
Video Coaxial Cable Requirements	RG59/U      750 feet (229 m) RG6/U      1,000 feet (305 m) RG11/U     1,500 feet (457 m)
Video Coaxial Cable Compensation Range (Inputs Only)	0-1,500 feet (using RG59/U cable) Selectable ranges: — None — 500 feet (152.4 m) — 1,000 feet (304.8 m) — 1,500 feet (457.2 m)
Differential Gain	Less than 1%
Differential Phase	Less than 1/2°
Maximum Output Level	1.0 Vp-p terminated
Signal-to-Noise Ratio	-45 dB
Tilt	Less than 1%
Inputs	Ground isolated
Character Size	7 x 9 TV Lines
Brightness	Individually adjustable (digital)
Position	Individually adjustable (digital)

## COMMUNICATION

Type	RS-232, RS-422, RS-485
Data Rate	Selectable; 1200, 2400, 4800 or 9600 baud
Cable Requirements	24-gauge shielded twisted pair
RS-232	Maximum 50 feet (15.25 m)
RS-422	Maximum 4,000 feet (1,219 m)
RS-485	Maximum 4,000 feet (1,219 m)

## GENERAL

Construction	Aluminum
Dimensions	5.25" H x 19.00" W x 12.90" D (13.21 x 48.26 x 32.77 cm)
Mounting	Fits 19-inch EIA Standard rack mount (3 RUs)
Operating Temperature	32° to 120°F (0° to 49°C)
Humidity	10% to 90%, non-condensing
Memory Backup	Lithium battery
Unit Weight	
CM9760-MDA	13.52 lb (6.13 kg)
CM9760-MDA-X	13.12 lb (5.95 kg)
Shipping Weight	
CM9760-MDA	20 lb (9.06 kg)
CM9760-MDA-X	20 lb (9.06 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (CM9760-MDA-X)
- FCC, Class B (CM9760-MDA)
- Meets NEMA Type 1 standards

Indicates change or addition.



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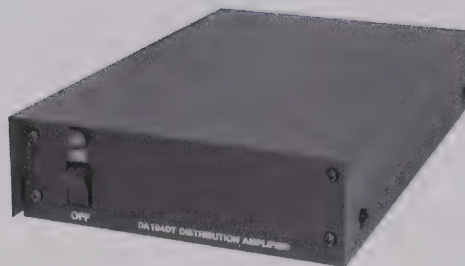
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# DA104DT Distribution Amplifier

## VIDEO AMPLIFIER

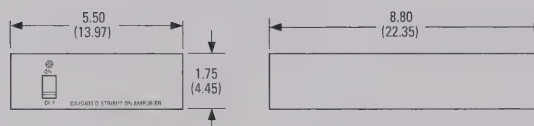
### Product Features

- 120 or 230 VAC Input Models Available
- Solid-State Electronics
- Desktop or Rack Mount
- Accepts Black and White or Color Video Inputs
- 4 Independent Video Outputs from a Single Video Input



The **DA104DT** distribution amplifier provides four independent video outputs from a single video input. Solid-state circuitry consisting of four identical video amplifiers in parallel provide four equal 75-ohm loads, which allow the video outputs to be viewed without distortion or loss of clarity.

The **DA104DT** is a desktop unit. Up to three units can be rack mounted in a single 1.75-inch by 19-inch (4.44 cm x 48.26 cm) rack using the R300 rack mount kit, or two units can be mounted side-by-side in one chassis using the DT200 dual desktop mount kit.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

VIDEO CONDITIONING  
DISTRIBUTION AMPLIFIER



DataFAX  
SPEC: 2605  
MANUAL: 26056

C605 / REVISED 10-00



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

DA104DT  
DA104DT/220

Distribution amplifier (1 input, 4 outputs)  
Same as DA104DT except 230 VAC operation

## ELECTRICAL

Input Voltage	120 VAC, 50/60 Hz or 230 VAC
Power On/Off	Rocker switch
Power Requirements	2.5 VA
Input Impedance	75 ohms
Output Impedance	75 ohms
Gain	Unity
Frequency Response	Flat within $\pm 1$ dB to 10 MHz
Maximum Signal Level	2 Vp-p
Connectors	BNC
Fuse Protection	3 AG, .2 ASB
Power Cord	3-wire grounded, 18 AWG

## GENERAL

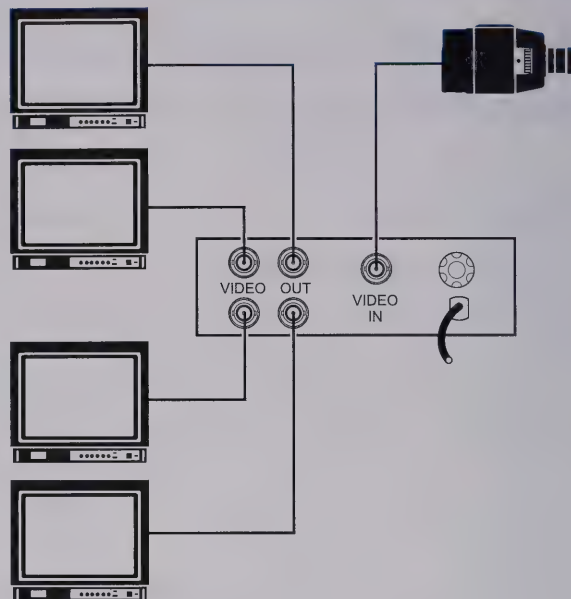
Construction	
Cover	Steel, black polyester powder coat
Chassis	Steel, zinc plated
Panel	Aluminum, black polyester powder coat with white silk-screen
Environment	32° to 120°F (0° to 49°C)
Humidity Tolerance	85%, non-condensing
Unit Weight	3 lb (1.35 kg)
Shipping Weight	4 lb (1.81 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (DA104DT/220)
- UL Listed (DA104DT)
- FCC, Class B (DA104DT)
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

DT200	Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.
R300	Rack mounting kit (1 RU) for up to three modules. Blank filler panels provided for less than three modules. (Factory racking available for R300 rack kit only. Specify when ordering.)



TYPICAL CONFIGURATION



### Pelco Worldwide Headquarters:

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USA & Canada Tel: (800) 289-9100 • FAX (800) 289-9150 • DataFAX (800) 289-9108

International Tel: (559) 292-1981 • FAX (559) 348-1120 • DataFAX (559) 292-0435

www.pelco.com

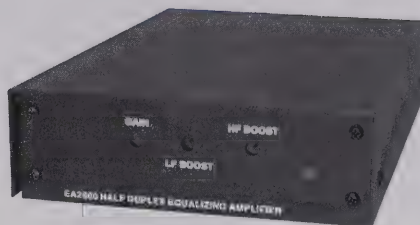
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# EA2000 Equalizing Amplifier

## HALF-DUPLEX, COAXITRON® CONTROL

### Product Features

- 120 or 230 VAC Input (for Wall Transformer)
- For use with Coaxitron® Control Systems
- Solid-State Circuitry
- For Post-Equalization Applications Only
- Desktop or Rack Mount



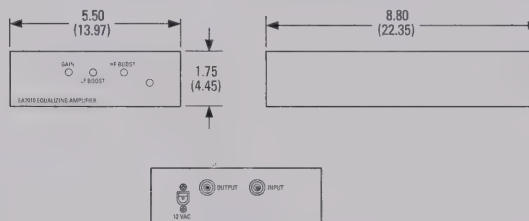
The **EA2000** is a half-duplex video/control equalizing amplifier intended for, but not restricted to, use with Pelco's Coaxitron® controls.

The **EA2000** provides a low cost, highly effective means of maintaining CCTV picture quality in runs of up to 3,000 feet (914 m) of RG59/U coaxial cable and also maintains the quality of the Coaxitron control signal. Front panel controls provide for adjustable amplifier flat gain of 1 to 8 dB, plus adjustable high frequency boost of 0 to greater than 18 dB at 12 MHz, maintaining full video amplitude, contrast and detail.

The **EA2000** features all solid-state circuitry and is supplied with a UL Listed wall transformer.

Applications of the **EA2000** should be for post-equalization only (located near the monitoring equipment); use as a pre-equalizer is discouraged.

Three units can be rack mounted using the R300 rack mount kit, or two units can be mounted side-by-side in one chassis using the DT200 dual desktop mount kit.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

VIDEO CONDITIONING,  
EQUALIZING AMPLIFIER



DataFAX  
SPEC: 2632  
MANUAL: 26326

C632 / REVISED 10-00



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

EA2000  
EA2000/220

Half-duplex equalizing video/control amplifier  
Same as EA2000 except 230 VAC operation

## ELECTRICAL

Input Voltage  
Power Requirements  
for Transformer

120 VAC, 50/60 Hz or 230 VAC, 50 Hz

Input  
Output  
Frequency Response

1.5 VA (0.125 amp) at 12 volts RMS  $\pm 15\%$ ,  
50-60 Hz from a dedicated, isolated source  
Single (BNC), internally terminated at 75 ohms  
Single (BNC), source terminated  
Adjustable from flat ( $\pm 1$  dB) at 12 MHz to  
greater than 18 dB of boost at 12 MHz  
Adjustable from 1-8 dB  
-74 dB

Gain  
Signal-to-noise Ratio  
Output  
Dynamic Range

Up to 2 Vp-p at 50% APL  
Up to 1.5 Vp-p at 90% APL  
Less than 2%

Tilt  
Cable Lengths

Cable Type	Maximum Effective Distance
RG59/U	3,000 ft (914.4 m)
RG6/U	4,500 ft (1371.6 m)
RG11/U	6,000 ft (1828.8 m)
RG15/U	8,000 ft (2438.4 m)

## GENERAL

Construction  
Chassis  
Cover  
Panel

Steel, zinc plated  
Steel, black polyester powder coat  
Aluminum, black polyester powder coat with  
white silk-screen

Environment

32° to 120°F (0° to 49°C)  
0% to 9% relative humidity

Unit Weight  
Shipping Weight

3 lb (1.35 kg)  
4 lb (1.8 kg)

## CERTIFICATIONS/RATINGS

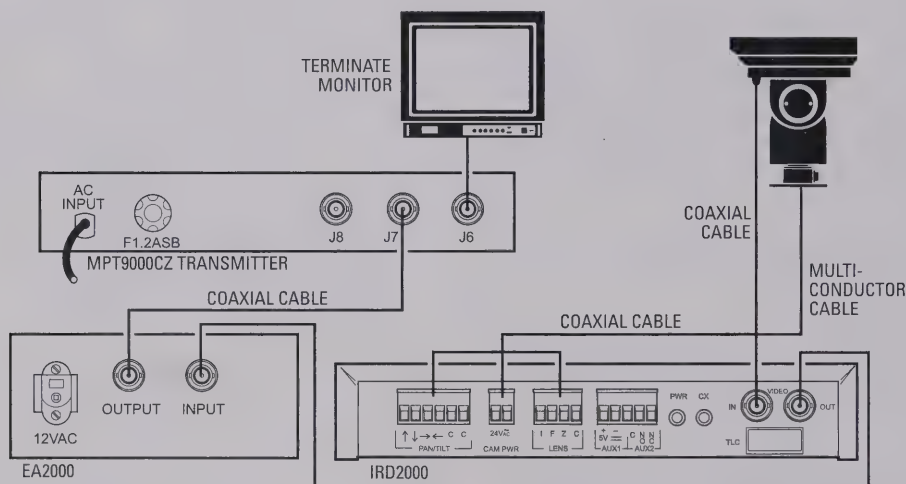
- CE, Class B (EA2000/220)
- UL Listed (EA2000)
- FCC, Class B (EA2000)
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

DT200

Dual desktop mount kit; two units can be  
mounted side-by-side in one desktop chassis.  
Rack mounting kit (1 RU) for up to three  
modules. Blank filler panels provided for less  
than three modules. (Factory racking available  
for R300 rack kit only. Specify when ordering.)

R300



TYPICAL CONFIGURATION



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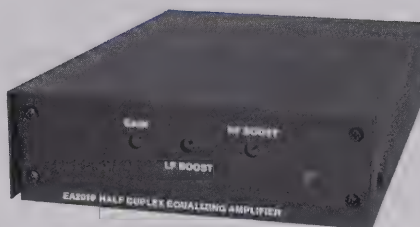


# EA2010 Video Amplifier

## POST-EQUALIZING, VIDEO ONLY

### Product Features

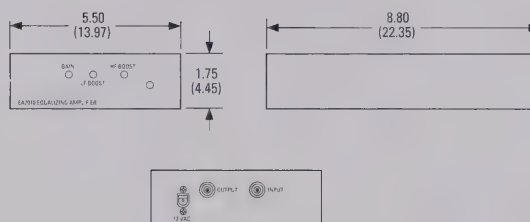
- Solid-State Circuitry
- 120 or 230 VAC Input (for Wall Transformer)
- For Post-Equalization Applications Only
- Desktop or Rack Mount



The **EA2010** provides a low cost, highly effective means of maintaining CCTV picture quality in runs of up to 3,000 feet (914 m) of RG59/U coaxial cable (equally effective with other cable types). Front panel controls provide for adjustable overall amplifier flat gain of 1 to 8 dB, plus adjustable high frequency boost of 0 to 18 dB at 12 MHz, maintaining full video amplitude, contrast, and detail.

The **EA2010** features all solid-state circuitry and is supplied with a U.L. Listed wall transformer. Applications of the **EA2010** should be for post-equalization only (located near the monitoring equipment); use as a pre-equalizer is discouraged.

The **EA2010** is a desktop unit. Up to three units can be mounted in a single 1.75-inch x 19-inch (4.44 cm x 48.26 cm) rack by using the R300 rack mount kit, or two units can be mounted side-by-side in one chassis using the DT200 dual desktop mount kit.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

VIDEO CONDITIONING,  
EQUALIZING AMPLIFIER



DataFAX  
SPEC: 2630  
MANUAL: 26306

C630 / REVISED 10-00



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

EA2010

Desktop post-equalizing video amplifier, highly effective in maintaining picture quality in runs of up to 3,000 feet (914 m) using RG59/U coax cable

EA2010/220

Same as EA2010 except 230 VAC operation

## ELECTRICAL

Input Voltage  
Power Requirements  
for Transformer

120 VAC, 50/60 Hz or 230 VAC, 50 Hz

Inputs  
Outputs  
Gain  
Signal-to-Noise Ratio  
Frequency  
Response

1.5 VA (.125 amp) at 12 volts RMS  $\pm 15\%$ , 50/60 Hz from a dedicated, isolated power source  
Single BNC, internally terminated in 75 ohms  
Single BNC, source terminated  
Adjustable from 1 to +8 dB  
-74 dB

Output  
Dynamic Range

Adjustable from flat ( $\pm 1$  dB) at 12 MHz, to greater than 18 dB of boost at 12 MHz

Cable Lengths

Up to 2 Vp-p at 50% APL  
Up to 1.5 Vp-p at 90% APL

Cable Type	Maximum Effective Distance
RG59/U	3,000 ft (914.4 m)
RG6/U	4,500 ft (1371.6 m)
RG11/U	6,000 ft (1828.8 m)
RG15/U	8,000 ft (2438.4 m)

## MECHANICAL

Recessed Screwdriver  
Adjustments

Gain, HF boost, LF boost

## GENERAL

Construction  
Cover  
Chassis  
Panel

Steel, black polyester powder coat  
Steel, zinc plated  
Aluminum, black polyester powder coat with white silk-screen

Environment

32° to 120°F (0° to 49°C)  
0% to 90% relative humidity

Unit Weight  
Shipping Weight

3 lb (1.35 kg)  
4 lb (1.8 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (EA2010/220)
- UL Listed (EA2010)
- FCC, Class B (EA2010)
- Meets NEMA Type 1 standards

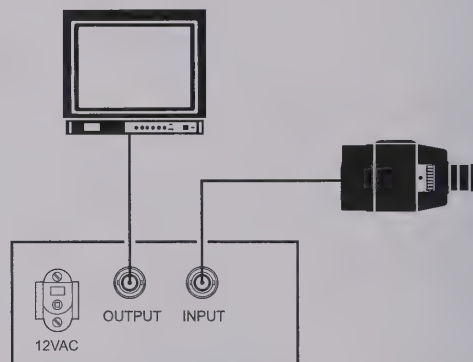
## OPTIONAL ACCESSORIES

DT200

Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.

R300

Rack mounting kit (1 RU) for up to three modules. Blank filler panels provided for less than three modules. (Factory racking available for R300 rack kit only. Specify when ordering.)



TYPICAL CONFIGURATION



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## GIT100 Transformer

### GROUND LOOP ISOLATION

#### Product Features

- Passive Device
- Wide Bandwidth
- Attenuates Ground Loop Interference
- Compatible with Coaxitron® Control Systems
- Easily Added to Existing Systems

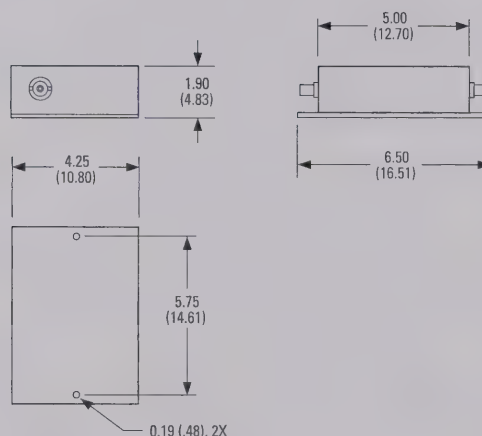
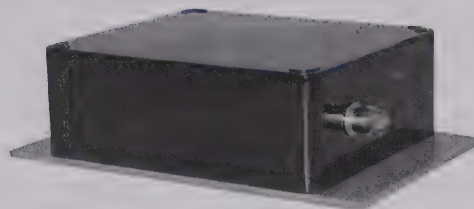
The **GIT100** is a ground loop isolation transformer which reduces ground loop interference in CCTV signals and can easily be added to existing systems. The **GIT100** provides a high degree of common mode isolation at power line frequencies, but passes signal frequencies from DC to over 200 MHz.

The **GIT100** is useful where a video signal is transmitted via cable between points with different ground potentials. Differences in ground potentials are typically caused by unbalanced power line loads, and the peak-to-peak magnitude may vary from zero to more than ten volts. The larger voltages are common for distances of a few thousand feet, not for small separations. Potentials of greater than 0.5 Vp-p are commonly found between two points in the same building.

Because the **GIT100** is passive and weatherproof, it can be conveniently located anywhere in your coax cable where ground loop potentials exist. More than one unit can and may be needed in situations where ground loop potential exceeds 10 Vp-p.

The **GIT100** was developed to minimize problems stemming from the existence of ground loop potentials (common mode voltages). In addition to providing an effective reduction of common mode voltages (CMV) at power line frequencies, it is even more effective at higher frequencies.

The **GIT100** is especially suited for use with Coaxitron® control systems because the passive design allows for bi-directional transmission of control and video signals.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

VIDEO CONDITIONING:  
FAULT PROTECTION



DataFAX  
SPEC: 2600  
MANUAL: 26006

C600 / REVISED 4-96



International Organization  
for Standardization  
Registered ISO 9001





## MODEL

GIT100

Passive ground isolation transformer compatible with Coaxitron control systems

## VIDEO

Ground Loop Voltage  
Video Performance  
Characteristics

Maximum CMV of 10 Vp-p at 60 Hz  
Equivalent in all respects to approximately 200 feet (60.96 m) of RG59/U coax

Common Mode  
Rejection (CMR)  
Connectors

See Table I and Figure 1  
BNC

## GENERAL

Unit Weight 3 lb (1.35 kg)  
Shipping Weight 4 lb (1.81 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 1 standards

## INSTALLATION

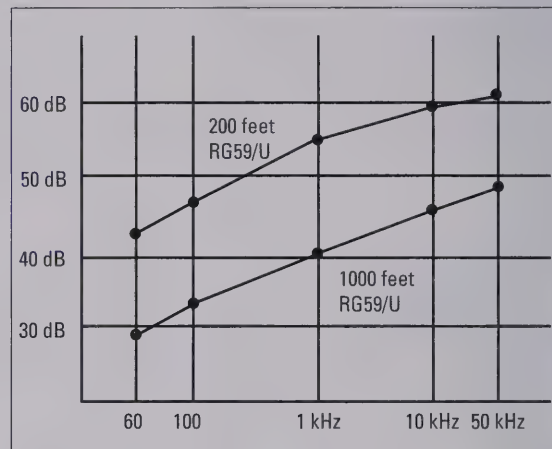
Although the GIT100 does not perform in all the manners of classical transformers, installation requirements are similar. A transformer must be placed between any two points where the cable shield is grounded and common mode voltage exists.

The GIT100 may be placed anywhere in your video signal cable. This allows convenience to dictate its location. More than one unit can be utilized in situations where the CMV exceeds 10 Vp-p.

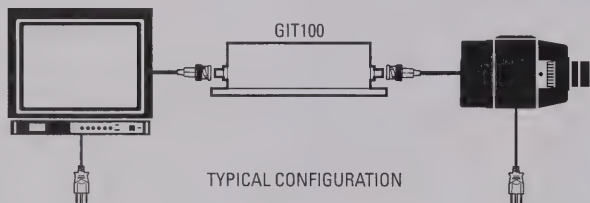
Table I and Figure 1 show that common mode rejection is inversely proportional to cable length and approximately proportional to the third root of frequency (rejection increases at approximately 6 dB per decade).

**Table I.** Common Mode Rejection (CMR)

Length of RG59/U	Effective CMR at 60 Hz
200 feet (60.96 m)	43 dB
400 feet (121.9 m)	37 dB
600 feet (182.9 m)	33 dB
800 feet (243.8 m)	31 dB
1,000 feet (300.8 m)	29 dB



**Figure 1.** Effective Ground Loop Voltage Attenuation



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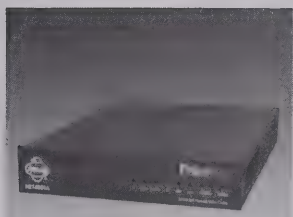
## DIGITAL NETWORK SYSTEMS

### Bridging the Gap Between Analog and IP-Based Digital Video



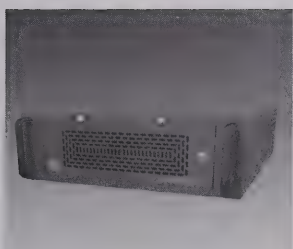
Pelco is pleased to introduce its newest offering of integrated network products: NET300, NET350, NET4001A, NVR300, and VMX300.

PelcoNet™ NET300 and NET350 Series video transmission devices make it possible to offer a comprehensive solution that allows customers to operate and integrate analog and IP devices within one system. NET300 and NET350 can be designed and specified in IP-only environments as well as in blended IP and analog environments. These units can work stand-alone, independent of each other, and can also easily become part of an integrated system with control via Pelco's new VMX300 video management system. When combined with the VMX300, network integration and managing and operating both analog and IP devices become seamless to the user.



The NET300 and NET350 provide video transmission for analog products, including cameras, video matrix systems, and integrated positioning systems such as Spectra and Esprit. Both units feature MPEG-4 dual stream encoding. The NET350 includes a CompactFlash® interface for local storage, Automatic Data Recovery (ADR), and audio. The ADR mode provides synchronization with the NVR300 to provide flawless recordings despite network failures.

The PelcoNet NET4001A transceiver allows you to transmit or receive live video, data, and audio across existing Ethernet networks. This IP-based video transmission system can display DVD quality video on a PC using Internet Explorer, an analog monitor, or both. The NET4001A features simultaneous MPEG-2 or MPEG-4 video stream encoding.

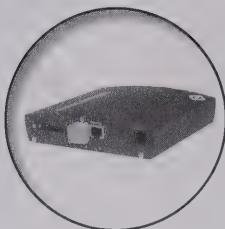


Our NVR300 network video recorder provides an integrated recording solution by enabling the storage of multiple video and audio streams at the same time. The NVR300 records video and audio data streams over TCP/IP networks. By means of an Ethernet interface, the NVR300 receives compressed data streams generated by the PelcoNet NET300, NET350 and NET4001A transmission systems. The NVR300 indexes the data stream and then transfers them to internal hard disk storage (RAID Level 5). Using Automatic Data Replenishment (ADR) technology, the NVR300 provides flawless recordings despite network failures when connected to a PelcoNet NET350. Depending on the size of the NET350 storage device, minutes, hours, and even days of recording are safely restored and copied to the NVR300.

The VMX300 Video Management System allows you to create a hybrid video security system, integrating analog video and IP-based digital video devices. While it's fully capable of providing a total "IP-only" package, its unique functionality helps users leverage their existing analog infrastructure. In addition to camera selection, operation, programming and routing, the VMX300 provides comprehensive DVR and NVR control, including playback of recorded video and alarm management. The VMX300 can be configured to display a combination of IP video and analog video through display windows.

PelcoNet™ is a trademark of Pelco.  
CompactFlash® is a registered trademark of SanDisk Corporation.

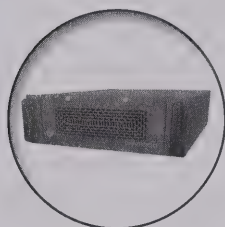
## Multimedia Transmission Systems



**NET350**

Model	Transmitter	Receiver	Local Storage	Audio	MPEG4	MPEG2	See Page
NET300	✓	✓			✓		357
NET350	✓	✓	✓	✓	✓		359
NET4001A	(Transceiver)	(Transceiver)		✓	✓	✓	361

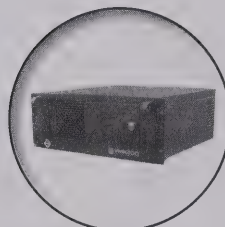
## Network Video Recorder



**NVR300**

The NVR300 provides an integrated recording solution by enabling the storage of multiple video and audio streams at the same time. Multiple NVR300s can seamlessly integrate with local and wide area enterprise networks. Using Automatic Data Replenishment (ADR) technology, the NVR300 provides flawless recordings despite network failures when connected to a PelcoNet NET350. When the network is restored after a failure, the NVR300 automatically retrieves video that was recorded on the local NET350 CompactFlash® storage device during the network failure. Depending on the size of the NET350 storage device, minutes, hours, and even days of recording are safely restored and copied to the NVR300. Store data on internal hard disk drives or by adding additional external RAID storage. (See page 363 for product information.)

## Centralized Video Management



**VMX300**

The VMX300 Video Management System allows you to create a hybrid video security system, integrating analog video and IP-based digital video devices. While it's fully capable of providing a total "IP-only" package, its unique functionality helps users leverage their existing analog infrastructure while enabling new IP video devices to be viewed and controlled from a common user interface. In addition to camera selection, operation, programming and routing, the VMX300 provides comprehensive DVR and NVR control, including playback of recorded video and alarm management. The VMX300 can be configured to display a combination of IP video and analog video through display windows. Analog video sources not routed through PelcoNet can be viewed in a single display window or in a quad display window, depending on the model selected.

For more information about Pelco's VMX300 Video Management System, refer to the specification sheets in the Matrix Switchers section of this book (pages 467-470).



## PelcoNet™ NET300

### IP NETWORK VIDEO TRANSMISSION

#### Product Features

- Send and Receive Live Video and Control Data Over Ethernet Networks
- Dual MPEG-4 Video Streams
- Full Integration with Pelco's Matrices, Genex® Multiplexers, Spectra® Domes, and Esprit® Positioning Systems
- Adjustable Bandwidth, Image Rate, and Quality
- View Video on PC, Analog Monitor, or Both
- NTSC and PAL
- Alarm Input and Relay Output
- Bidirectional Data Channel Via RS-232/422/485 Serial Port



The **NET300** can be used in three ways:

- **Standalone** — as a transmitter or receiver for a camera where BNC cable is not possible. This allows one-way video transmission for fixed cameras or the option of sending control signals to a Spectra® dome or Esprit® positioning system.
- **Analog to Ethernet "Bridge"** — as a way of using one or more **NET300s** connected to a system of Pelco matrices or Genex® multiplexers to view video from a vast number of camera analog inputs. In this application the analog device is being used as a "concentrator" to allow viewing of hundreds of cameras without incurring the cost of hundreds of encoders.
- **Complete Ethernet System** — as a way of controlling an unlimited number of cameras via **NET300s** by using Pelco's VMX series of matrix control software in a purely Ethernet or hybrid system. Ethernet systems involve using an encoder with each camera and using the Ethernet as a virtual matrix. This is cost efficient for new installations or add-ons to existing installations. Using the VMX300 as control software for existing systems as well as new Ethernet portions allows the user to build the industry's only truly "hybrid" CCTV system.

The **NET300** can display video on a PC using Internet Explorer®, an analog monitor, or both.

PelcoNet™ transmits (**NET300T**) or receives (**NET300R**) live video and data across existing Ethernet networks. Sending video over computer networks yields significant cost savings by using an existing computer network to monitor a remote site.

The **NET300** saves installation costs (no separate cabling required), allows toll-free operation (intranets), and saves management costs (single, uniform network).

With minimal setup, the **NET300** transmission system can be installed and running in minutes.

When using a **NET300T** and a **NET300R**, connect a camera to a transmitter and an analog monitor to a receiver. Then connect the transmitter and receiver to the network and configure IP addresses for the equipment using a standard terminal program or any Internet browser. If you need to control a camera (operate pan, tilt, and lens functions, or do presets and patterns), an RS-232/422/485 data interface links the keyboard controls to the network and then from the network to the camera system.

Instead of (or in addition to) a receiver and monitor, an Internet browser can be used at the receiving end to display video on a PC. On-screen keyboards in the **NET300** let you control the following devices over the network: System 9760®/9740™ or CM6700/CM6800 matrix controller, Genex multiplexers, Spectra domes, and Esprit positioning systems.

The **NET300T**, featuring dual MPEG-4 video streams, lets you use computer networks to interface your control and monitoring stations with remote camera sites, whether they are in the same building, across the country, or around the world.



**DataFAX**  
**SPEC:** 22908  
**MANUAL:** Not Available through DataFAX

C2908 / NEW 9-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

NET300T	Network video transmitter that encodes video and control data for transmission over an IP network
NET300R	Network video receiver that decodes video and control data received from an IP network

### Minimum PC Requirements (as needed)

- PC (Pentium® 4 microprocessor, 1.6 GHz) with Windows®98/2000/XP or higher operating system
- 256 MB of RAM
- Gateway to the network
- 100 Mbit Ethernet card
- Sound card if using audio application
- Microsoft® Internet Explorer 6.0 (or higher), or free serial interface and terminal program, or PelcoNet NET300R (receiver) and video monitor
- DirectX® 8.1 or 9.0 application programming interface
- Screen resolution of 1024 x 768 or higher, 16- or 32-bit pixel color resolution
- Graphic Card: ATI RADEON™ 7500 or 8500, Matrox G 550 or Parhelia™, or NVIDIA® GeForce 3 or 4 with MPEG-4 playback capability

## RELATED PRODUCTS

NET350	IP network video system that transmits (NET350T) or receives (NET350R) live video, audio and control data across Ethernet networks. Features CompactFlash® and dual MPEG-4 video streams.
NET4001A	IP network video transmission system that transmits and receives live video, audio, and control data across Ethernet networks. Provides DVD quality video in MPEG-2 or MPEG-4 format.
VMX300	Video management system that provides control and monitoring of both analog and digital video systems. Supports client-to-server, client-to-multiple servers, and server-to-server configurations.
NVR300	Network video recorder that records video and audio over TCP/IP networks. Through its Ethernet interface, it can receive compressed data generated by the PelcoNet NET300, NET350, and NET4001A. The NVR300 indexes the data and then transfers it to an internal storage unit. Storage can be expanded externally.

## NETWORK PROTOCOL AND STANDARDS COMPATIBILITY

Internet Configuration	RTP, RTCP, UDP, TCP, IP, HTTP, SNMP, IGMP, ICMP, ARP, DHCP
Video Coding	MPEG-4 (M-JPEG in Server Push mode only)
Video Frame Rate	Up to 30 images/second

## INTERFACES

Video Input or Output	1, BNC, PAL/NTSC, 75 ohms, 1 Vp-p
LAN Interface	Ethernet 10/100BaseT autosensing, RJ-45
LAN Data Rate	9.6 Kbps to 1.5 Mbps
Data Interface	1 RS-232/RS-422/RS-485, bidirectional (9-pin, D-sub)
Alarm Input	2 terminal, 30 VDC maximum
Alarm Output	1 terminal, 30 VDC, 1 A

## VIDEO

Video Standard	PAL, NTSC
Video Image Size	704 x 576 pixels (high resolution) 352 x 288 pixels (CIF)

## POWER

Type	Plug power adapter
Operating Voltage	12-24 VDC, power supply included
Power Consumption	Approximately 10 W

## ENVIRONMENTAL

Operating Temperature	32° to 122°F (0° to 50°C)
Operating Humidity	80% maximum relative humidity, non-condensing
Storage Temperature	4° to 140°F (-20° to 60°C)
Storage Humidity	95% maximum relative humidity, non-condensing

## GENERAL

Dimensions	3.4" W x 1.2" H x 4.5" D (8.6 x 3.1 x 11.4 cm)
Unit Weight	Approximately 0.4 lb (0.2 kg) without power supply
Shipping Weight	Approximately 2 lb (0.9 kg)

## CERTIFICATIONS

- CE, Class B
- cTUVus
- FCC, Class B

## OPTIONAL ACCESSORIES

NET300RK	Rack mount for 1-5 units. Fits standard 19-inch EIA rack or console (1 RU).
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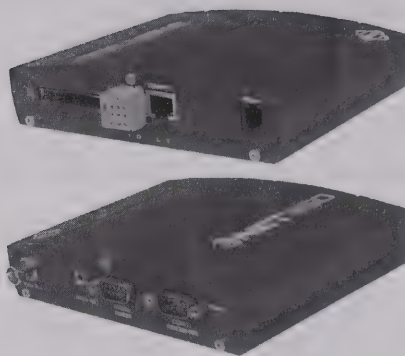


## PelcoNet™ NET350

### IP NETWORK VIDEO TRANSMISSION WITH COMPACTFLASH® INTERFACE AND AUDIO

#### Product Features

- Send and Receive Live Video, Audio, and Control Data Over Ethernet Networks
- Dual MPEG-4 Video Streams
- CompactFlash® Interface for Local Recording
- Full Integration with Pelco's Matrices, Genex® Multiplexers, Spectra® Domes, and Esprit® Positioning Systems
- Adjustable Bandwidth, Image Rate, and Quality
- View Video on PC, Analog Monitor, or Both
- NTSC and PAL
- Alarm Input and Relay Output
- Two Bidirectional Data Channels Via RS-232 and RS-232/422/485 Serial Ports



The **NET350** can be used in three ways:

- **Standalone** — as a transmitter or receiver for a camera where BNC cable is not possible. This allows one-way video transmission for fixed cameras or the option of sending control signals to a Spectra® dome or Esprit® positioning system.
- **Analog to Ethernet "Bridge"** — as a way of using one or more **NET350s** connected to a system of Pelco matrices or Genex® multiplexers to view video from a vast number of camera analog inputs. In this application the analog device is being used as a "concentrator" to allow viewing of hundreds of cameras without incurring the cost of hundreds of encoders.
- **Complete Ethernet System** — as a way of controlling an unlimited number of cameras via **NET350s** by using Pelco's VMX series of matrix control software in a purely Ethernet or hybrid system. Ethernet systems involve using an encoder with each camera and using the Ethernet as a virtual matrix. This is cost efficient for new installations or add-ons to existing installations. Using the VMX300 as control software for existing systems as well as new Ethernet portions allows the user to build the industry's only truly "hybrid" CCTV system.

The **NET350** can display video on a PC using Internet Explorer®, an analog monitor, or both.

PelcoNet™ transmits (**NET350T**) or receives (**NET350R**) live video, data, and audio across existing Ethernet networks. Sending video and audio over computer networks yields significant cost savings by using an existing computer network to monitor a remote site.

The **NET350** saves installation costs (no separate cabling required), allows toll-free operation (intranets), and saves management costs (single, uniform network). With minimal setup, the NET350 transmission system can be installed and running in minutes.

When using a **NET350T** and a **NET350R**, connect a camera to a transmitter and an analog monitor to a receiver. Then connect the transmitter and receiver to the network and configure IP addresses for the equipment using a standard terminal program or any Internet browser. If you need to control a camera (operate pan, tilt, and lens functions, or do presets and patterns), an RS-232 data interface links the keyboard controls to the network and then from the network to the camera system.

Instead of (or in addition to) a receiver and monitor, an Internet browser can be used at the receiving end to display video on a PC. On-screen keyboards in the **NET350** let you control the following devices over the network: System 9760®/9740™ or CM6700/CM6800 matrix controller, Genex multiplexers, Spectra domes, and Esprit positioning systems.

All recordings can be stored locally using a CompactFlash® card or miniature disk drive (up to 1 GB capacity).

The **NET350T**, featuring CompactFlash and dual MPEG-4 video streams, lets you use computer networks to interface your control and monitoring stations with remote camera sites, whether they are in the same building, across the country, or around the world.

DIGITAL NETWORK SYSTEMS  
PELCONET NET350



DataFAX  
SPEC: 22907  
MANUAL: Not Vailable through DataFAX

C2907 / NEW 9-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

NET350T	Network video transmitter that encodes video, audio, and control data for transmission over an IP network
NET350R	Network video receiver that decodes video, audio, and control data received from an IP network

### Minimum PC Requirements (as needed)

- PC (Pentium® 4 microprocessor, 1.6 GHz) with Windows®98/2000/XP or higher operating system
- 256 MB of RAM
- Gateway to the network
- 100 Mbit Ethernet card
- Sound card if using audio application
- Microsoft® Internet Explorer 6.0 (or higher), or free serial interface and terminal program, or PelcoNet NET350R (receiver) and video monitor
- DirectX® 8.1 or 9.0 application programming interface
- Screen resolution of 1024 x 768 or higher, 16- or 32-bit pixel color resolution
- Graphic Card: ATI RADEON™ 7500 or 8500, Matrox G 550 or Parhelia™, or NVIDIA® GeForce 3 or 4 with MPEG-4 playback capability

## RELATED PRODUCTS

NET300	Network video system that transmits (NET300T) or receives (NET300R) live video and control data across Ethernet networks. Features dual MPEG-4 video streams.
NET4001A	IP network video transmission system that transmits and receives live video, audio, and control data across Ethernet networks. Provides DVD quality video in MPEG-2 or MPEG-4 format.
VMX300	Video management system that provides control and monitoring of both analog and digital video systems. Supports client-to-server, client-to-multiple servers, and server-to-server configurations.
NVR300	Network video recorder that records video and audio over TCP/IP networks. Through its Ethernet interface, it can receive compressed data generated by the PelcoNet NET300, NET350, and NET4001A. The NVR300 indexes the data and then transfers it to an internal storage unit. Storage can be expanded externally.

## NETWORK PROTOCOL AND STANDARDS COMPATIBILITY

Internet Configuration	RTP, RTCP, UDP, TCP, IP, HTTP, SNMP, IGMP, ICMP, ARP, DHCP
Video Coding	MPEG-4 (M-JPEG in Server Push mode only)
Vide Frame Rate	Up to 30 images/second

## INTERFACES

Video Input or Output	1, BNC, PAL/NTSC, 75 ohms, 1 Vp-p
Audio Input/Output	3.5 mm jack, monaural
LAN Interface	Ethernet 10/100BaseT autosensing, RJ-45
LAN Data Rate	9.6 Kbps to 1.5 Mbps
Data Interface	1 RS-232/RS-422/RS-485, bidirectional (9-pin, D-sub) and 1 RS-232 (9-pin, D-sub)
Alarm Input	1 terminal, 30 V maximum
Alarm Output	1 terminal, 30 V, 1 A

## VIDEO

Video Standard	PAL, NTSC
Video Image Size	704 x 576 pixels (high resolution) 352 x 288 pixels (CIF)

## POWER

Type	Plug power adapter
Operating Voltage	12-24 VDC, power supply included
Power Consumption	Approximately 10 W

## MISCELLANEOUS

LED Displays	5 LEDs (alarm, relay, connection, data, power)
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## ENVIRONMENTAL

Operating Temperature	32° to 122°F (0° to 50°C)
Operating Humidity	80% maximum relative humidity, non-condensing
Storage Temperature	4° to 140°F (-20° to 60°C)
Storage Humidity	95% maximum relative humidity, non-condensing

## GENERAL

Dimensions	5.6" W x 1.3" H x 5.3" D (14.3 x 3.3 x 13.5 cm)
Unit Weight	Approximately 0.9 lb (0.4 kg) without power supply
Shipping Weight	Approximately 2 lb (0.9 kg)

## CERTIFICATIONS

- CE, Class B
- cTUVus
- FCC, Class B

## OPTIONAL ACCESSORIES

NET350RK	Rack mount for 1-3 units. Fits standard 19-inch EIA rack or console (1 RU).
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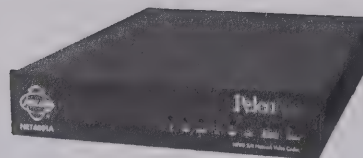
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# PelcoNet™ NET4001A

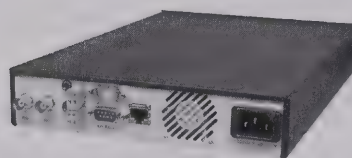
## IP NETWORK VIDEO TRANSMISSION WITH DVD QUALITY VIDEO

### Product Features

- DVD Quality Video
- Simultaneous MPEG-2 and MPEG-4 Video Streams
- Full Integration with Pelco's Matrixes, Genex® Multiplexers, Spectra® Domes, and Esprit® Positioning Systems
- Video, Audio, and Data over IP
- Adjustable Bandwidth, Image Rate, and Quality
- View Video on PC, Analog Monitor, or Both
- NTSC and PAL
- 1 Alarm Inputs, 1 Relay Outputs
- Serial Port RS-422 Programmable
- Includes Rack Kit for EIA Standard Rack Mounting



NET4001A TRANSMITTER/RECEIVER (FRONT)



NET4001A TRANSMITTER/RECEIVER (REAR)

The **NET4001A** brings DVD quality video in MPEG-2 or MPEG-4 format to Pelco's line of video transmission systems. Additionally, its versatility as a transmitter or receiver eliminates the inconvenience of ordering different products for transmitting and receiving video.

The **NET4001A** can be used in all applications where RG-59/U coax cable is unfeasible due to distance or installation difficulty. The IP-based video transmission system can display video on a PC using Internet Explorer, an analog monitor, or both. The traditional limitation in IP-based video has been reduced image quality, but now DVD quality images are available using the **NET4001A**.

The **NET4001A** transmits or receives live video, data, and audio across existing Ethernet networks. Sending video and audio over computer networks yields significant cost savings by using an existing computer network to monitor a remote site. The **NET4001A** saves installation costs (no separate cabling required), allows toll-free operation (intranets), and saves management costs (single, uniform network).

With minimal setup, the **NET4001A** transmission system can be installed and running in minutes.

When using two **NET4001As**, connect a camera to a transmitter unit and an analog monitor to a receiver unit. Then connect the transmitter and receiver to the network and configure IP addresses for the equipment using a standard terminal program or any Internet browser. If you need to control a camera (operate pan, tilt, and lens functions, or do presets and patterns), an RS-232 data interface links the keyboard controls to the network and then from the network to the camera system.

Instead of (or in addition to) a receiver and monitor, an Internet browser can be used at the receiving end to display video on a PC. On-screen keyboards in the **NET4001A** let you control the following devices over the network: System 9760®/9740™ or CM6700/CM6800 matrix controller, Genex multiplexers, Spectra domes, and Esprit positioning systems.

The **NET4001A** now gives you DVD quality video when using computer networks to interface your control and monitoring stations with remote camera sites, whether they be in the same building, across the country, or around the world.

DIGITAL NETWORK SYSTEMS  
PELCONET NET4001A



**DataFAX**  
**SPEC:** 22904  
**MANUAL:** Not Available through DataFAX

C2904 / NEW 3-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

NET4001A

Network video transceiver that encodes and decodes video, audio, and control data for transmission over an IP network.

### Minimum Requirements:

- PC (Pentium® 4 microprocessor, 1.6 GHz) with Windows® 98/2000/XP or higher operating system
- 256 Mbyte RAM
- ATI RADEON™ 7500 or 8500, Matrox® G550 or Parhelia™, or NVIDIA® GeForce™ 3 or 4 with direct show-compatible MPEG-2 playback capability (DVD player) graphic card
- 100 Mbit ethernet card
- Sound card required for audio application
- Microsoft® Internet Explorer 5.5 (or higher) or free serial interface and terminal program or PelcoNet NET4001A (acting as receiver) and video monitor
- DirectX® 8.1 or 9.0
- Screen resolution of 800 x 600 pixels or higher, 16- or 32-bit pixel color resolution

## NETWORK PROTOCOL AND STANDARDS COMPATIBILITY

Internet

Configuration

RTP, RTCP, UDP, TCP, IP, HTTP, SNMP, IGMP, ICMP, ARP, DHCP

Video Coding

MPEG-2, MPEG-4, (M-JPEG in Server Push mode only)

Video Frame Rate

Up to 30 images/second

## INTERFACES

Video Input

1, BNC, PAL/NTSC, 75 ohms, 1 Vp-p

Video Output

1, BNC, PAL/NTSC, 75 ohms, 1 Vp-p

Audio Input

RCA phono jack, stereo

Audio Output

RCA phono jack, stereo

LAN Interface

UTP (Ethernet 10/100BASE-T auto-sensing), RJ-45

LAN Data Rate (approx.)

MPEG-2

1 Mbit/s to 6 Mbit/s

MPEG-4

9.6 kbit/s to 1.5 Mbit/s

Data Interface

2, RS-232/RS-422/RS-485, bi-directional (9-pin, D-sub)

Alarm Input

1 terminal for direct connection of control, maximum 40 V, 0.8 A

Alarm Output

1 terminal for relay

## VIDEO

Video Standards

PAL, NTSC

Video Image Size

704 x 576 pixels (high resolution)

352 x 288 pixels (CIF)

## POWER

Operating Voltage

90-250 VAC, 50/60 Hz

LED Displays

9 LEDs (video, in, out, Ethernet port (2), IR\*, HDD\*, COM port, power)

\* For future use

## ENVIRONMENTAL

Operating Temperature

32° to 122°F (0° to 50°C)

Operating Humidity

80% maximum relative humidity, non-condensing

Storage Temperature

-4° to 140°F (-20° to 60°C)

Storage Humidity

95% maximum relative humidity, non-condensing

## GENERAL

Dimensions

1.7" H x 8.1" W x 11.9" D (4.4 x 20.5 x 30.1 cm)

Unit Weight

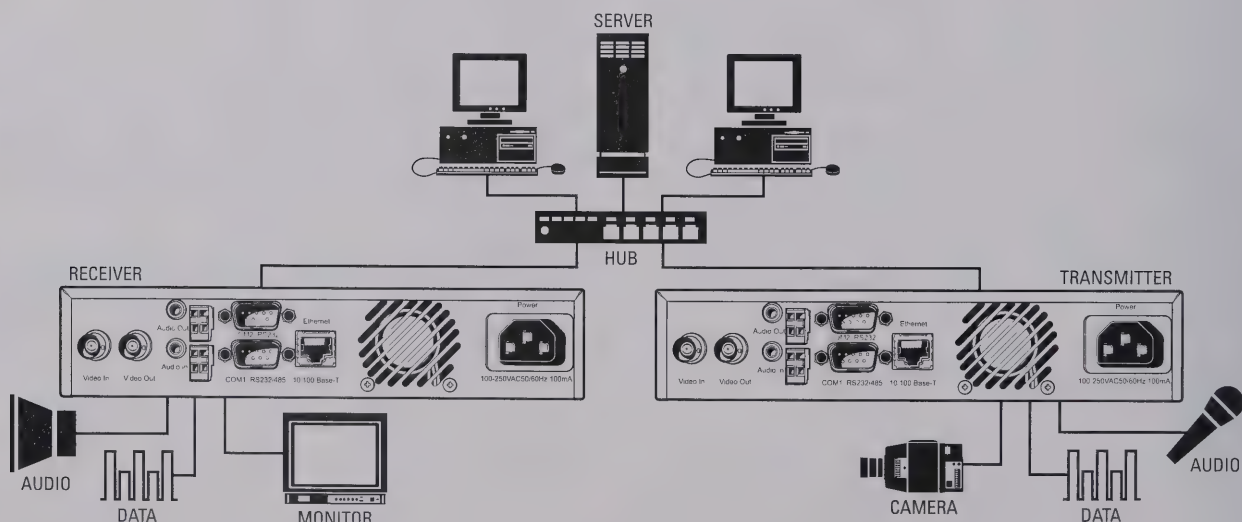
Approx. 4.4 lb (2.0 kg)

Shipping Weight

Approx. 8 lb (3.6 kg)

## CERTIFICATIONS

- CE, Class B
- cTUVus
- FCC, Class B



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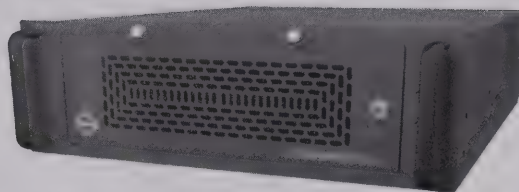


# NVR300 Network Video Recorder

16/32/64 AUDIO/VIDEO STREAMS, 120-1,500 GB HARD DISK DRIVE

## Product Features

- Compatible with PelcoNet™ NET300, NET350, and NET4001A Transmission Systems
- Video and Audio Recording over TCP/IP Networks
- Video Recording of MPEG-2 and MPEG-4 Streams
- Recording of up to 64 Simultaneous Audio/Video Streams
- Duplex Operation: Simultaneous Recording and Playback
- Continuous and Alarm-Based Recording
- Full-Featured Search Capabilities: Search Based on Camera, Time, or Date
- Patented Automatic Data Replenishment (ADR) Technology That Ensures Recording Even If the Network Is Down
- Digital Certification by Watermarking
- Internal RAID (Redundant Array of Independent Disks) Storage of up to 1,500 GB



- Expandable RAID Storage with the Use of up to Two External DX9200HDDI Video Storage Units for Mass Storage Requirements
- Full Integration with the VMX300 Video Management System
- Integrated Web Server Functionality

The **NVR300** network video recorder records video and audio data streams over TCP/IP networks. By means of an Ethernet interface, the **NVR300** receives compressed data streams generated by the PelcoNet NET300, NET350, and NET4001A transmission systems. The **NVR300** indexes the data streams and then transfers the data streams to internal hard disk storage (RAID Level 5). RAID storage can be expanded externally by connection of the **NVR300** to up to two DX9200HDDI video storage units.

Using Automatic Data Replenishment (ADR) technology, the **NVR300** provides flawless recordings despite network failures when connected to a PelcoNet NET350. When the network is restored after a failure, the **NVR300** automatically retrieves video that was recorded on the local NET350 CompactFlash® storage device during the network failure. Depending on the size of the NET350 storage device, minutes, hours, and even days of recording are safely copied to the **NVR300**.

The **NVR300** provides an HTML-based graphical user interface (GUI) that is viewed in a Web browser and can be easily accessed for the programming, playback, and backup of recordings. In addition, integration of the **NVR300** with the VMX300 video management system allows the **NVR300** to be accessed from and controlled by the VMX300.

Recording is programmable for each PelcoNet device known to the **NVR300**. Recordings can be started and stopped manually or can be based on a predefined weekly time schedule. Recordings can also be based on the occurrence of alarm events, including alarms with predefined pre- and post-alarm periods. Based upon the PelcoNet device being recorded, video format can be set to MPEG-2 or MPEG-4.

A graphical display of the status of the **NVR300** provides detailed information about the active recordings of the **NVR300**. The detailed information includes items such as system load and remaining hard disk drive capacity.

Sophisticated playback features allow stored recordings on the **NVR300** to be viewed. Recordings to be viewed can be searched on a camera, time, or date basis. In addition, recordings can be backed up to any client PC in the network or to any shared drive in the network. The **NVR300** also allows recordings to be exported to standard MPEG format so that they can be viewed without the need for client (viewer) software.

Removable hard disk drives in RAID units are field-upgradable and field-serviceable. In the unlikely event of a hard disk drive failure, a new hard disk drive can be installed without loss of data.



DataFAX  
SPEC: 2611  
MANUAL: Not Available through DataFAX

C611 / PRELIMINARY 10-03

PRELIMINARY



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

The NVR300 comprises a series of network video recorders based on the maximum number of supported streams: 16, 32, or 64. NVR300 network video recorders also vary based on the amount of internal storage, the hard disk drive configuration, and the capability to connect to external storage units.

Stream Capacity	Model No.	Internal Storage Space (GB)	RAID 5 Hard Disk Drive Configuration	SCSI Connections for External Storage
16 Streams	NVR316-120	120	No	No
	NVR316-250	250	No	No
	NVR316-500	500	No	No
	NVR316-750	750	Yes	Yes
	NVR316-1000	1,000	Yes	Yes
	NVR316-1500	1,500	Yes	Yes
32 Streams	NVR332-120	120	No	No
	NVR332-250	250	No	No
	NVR332-500	500	No	No
	NVR332-750	750	Yes	Yes
	NVR332-1000	1,000	Yes	Yes
	NVR332-1500	1,500	Yes	Yes
64 Streams*	NVR364-120	120	No	No
	NVR364-250	250	No	No
	NVR364-500	500	No	No
	NVR364-750	750	Yes	Yes
	NVR364-1000	1,000	Yes	Yes
	NVR364-1500	1,500	Yes	Yes

\*Actual limitation is 100 Mbits/s.

## Supplied Accessories:

Rack ears and rack-mount rails  
Two power cords (1 USA standard and 1 European standard)  
Mouse and keyboard

## RELATED PRODUCTS

NET300T	IP network video transmission system that transmits live video and control data across Ethernet networks. Features dual MPEG-4 video streams.
NET350T	IP network video transmission system that transmits live video, audio, and control data across Ethernet networks. Features CompactFlash and dual MPEG-4 video streams.
NET4001A	IP network video transmission system that transmits and receives live video, audio, and control data across Ethernet networks. Provides DVD quality video in MPEG-2 and MPEG-4 format.
VMX300	Video management system that provides control and monitoring of both analog and digital video systems. Supports client-to-server, client-to-multiple server, and server-to-server configurations.

## ELECTRICAL/VIDEO

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	235 W maximum
Operating System	Microsoft® Windows® XP Professional
Recording Rate	10 kbit/s to 100 Mbits/s
Recording Frame Rate	Up to 30 images per second (ips) per video stream, total of 1920 ips for 64 streams
Compression	MPEG-2, MPEG-4
Hard Disk Drive Configuration	RAID 5 for 750 GB, 1,000 GB and 1,500 GB units; no RAID for 120-500 GB units

## MECHANICAL

Connectors	PS/2 mouse and keyboard Monitor port (VGA) Ethernet port (10/100/1000BaseT) Two ports available Two ports available for DX9200HDDI video storage units (700 GB and greater) One line-out connector for headphone or speakers
Audio	
Hardware	
Processor	Intel® Pentium® 4, 2.4 GHz
Memory	512 MB RAM

## GENERAL

Operating Temperature	41° to 104°F (5° to 40°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	5.35" H x 17.0" W x 23.1" D (13.6 x 43.0 x 58.7 cm)
Rack-Mount Dimensions	5.25" H x 19.0" W x 23.1" D (3 RUs) (13.3 x 48.26 x 58.7 cm)
Unit Weight (maximum)	60.0 lb (27.22 kg)

## CERTIFICATIONS

- CE, Class A
- UL Listed
- UL Listed to Canadian Safety Standards
- FCC, Class A

## CLIENT PC SYSTEM REQUIREMENTS

Hardware	
Processor	Intel Pentium III Xeon™, 1.8 GHz, or higher
Memory	512 MB RAM
Graphic Card	ATI RADEON™ 8500/9000 or 9500, NVIDIA® GeForce 3 or 4, Matrox Parhelia™
Network Interface	Ethernet 10/100/1000 BaseT as needed
Sound Card	Standard (optional)
Software	
Windows® 2000, XP (Service Pack 1)	
Microsoft® Internet Explorer 6.0	
DirectX® 9.0	
MPEG ActiveX (latest PelcoNet version)	



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## MONITORS

### Monochrome, Color, and Quad

#### Monochrome

Pelco's high-resolution monochrome video monitors are designed for use with CCTV-type cameras. These monitors produce high resolution of more than 800 TV lines and work in all TV formats and power requirements: 120 VAC, 60 Hz (EIA) or 230 VAC, 50 Hz (CCIR).

#### Color

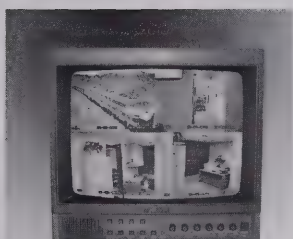
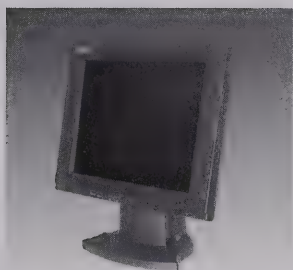
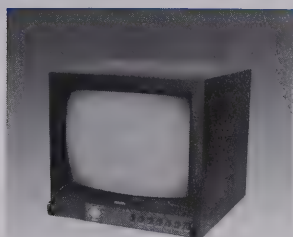
Pelco's wide array of color models range from an economical 10-inch to super-high resolution monitors capable of producing resolution more than 700 TV lines. All models have an automatic switching system for voltage and video format. In addition, models feature audio input and output and have NTSC, PAL, and S-VHS inputs.

#### Quad

Pelco's quad monitor is an economical way to view up to four camera inputs on one high performance, color monitor. Monitor controls are located on the front of the unit. Zoom in on a single camera with the touch of a button.

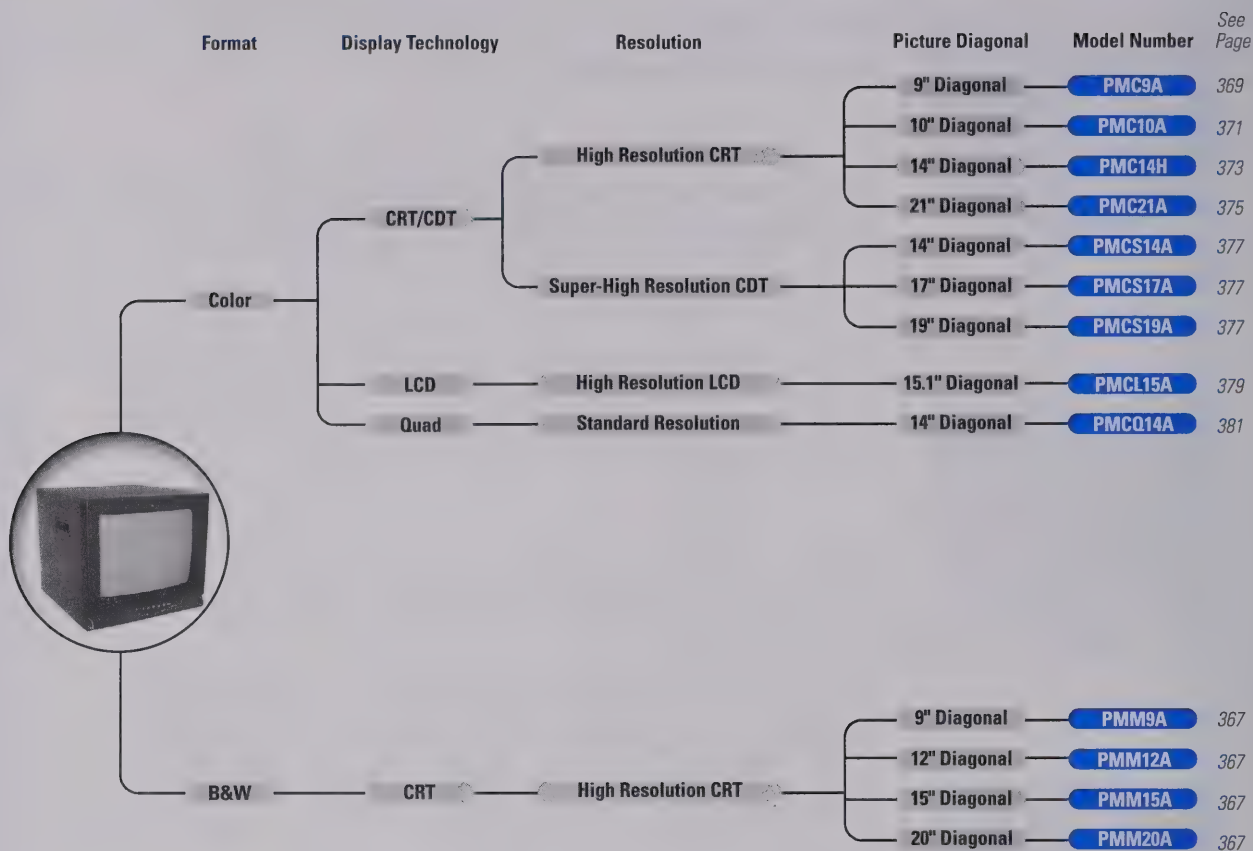
Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about monitors can be found on the related specification sheets within this section. For information on the Public Viewing System, refer to the MR5000 Series specification located in the Racks and Consoles section of this book.

- Monitor Selection Guide
- Public Viewing System Selection Guide

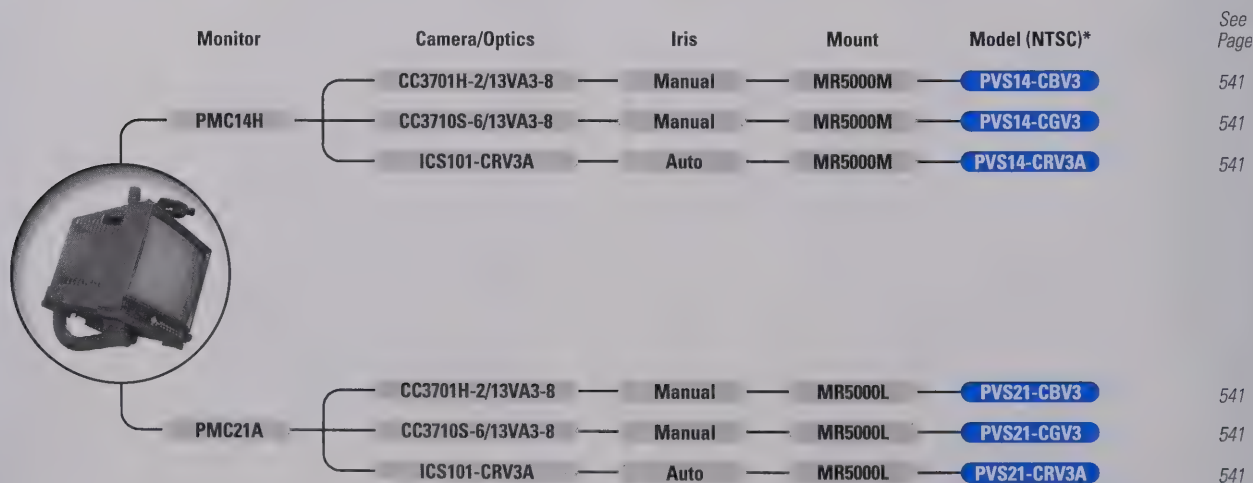




# Monitor Selection Guide



Need a monitor, mount, and camera/optics package conveniently packaged and ready to install? If so, you might want to consider our public viewing systems. Three camera packages are available: CC3701H-2 or CC3710S-6 camera with 3-8 mm varifocal lens, or ICS101 flush mount Camclosure® with clear dome and 3-6 mm varifocal auto iris lens. Then select from either a 14-inch or 21-inch color monitor and we package these components with the appropriate ceiling mount. (Refer to the selection guide below for model numbers.)



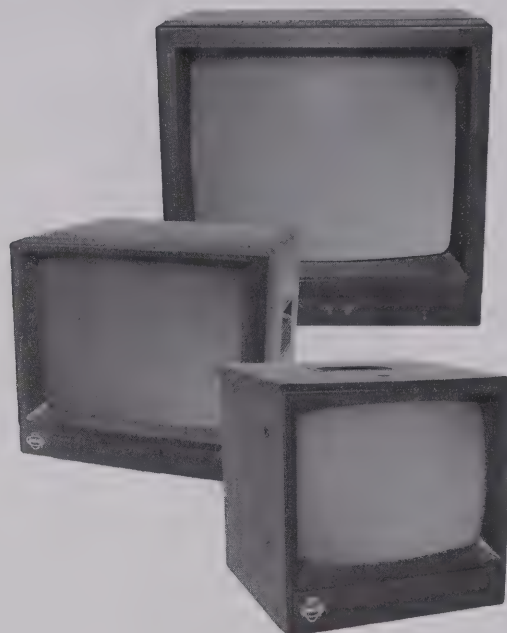
\*Consult factory for PAL models.

## PMM9A/PMM12A/PMM15A/PMM20A Monitor

### 9-/12-/15-/20-INCH MONOCHROME, HIGH RESOLUTION

#### Product Features

- High Resolution
- Front Panel Controls
- Built-in Carrying Handles
- Optional Rack Mounting
- 96-256 VAC Input, Auto Ranging
- 75-Ohm/High-Impedance Termination Switch on Rear
- For Use with CCTV Type Cameras
- EIA/CCIR, Auto Sensing



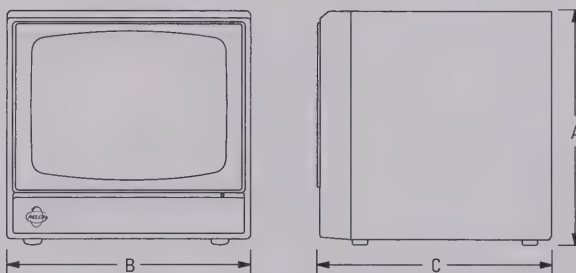
The **PMM9A/PMM12A/PMM15A/PMM20A** are high resolution monochrome video monitors designed for use with CCTV type cameras and can be used in desktop applications or rack mounted in a standard 19-inch rack (except PMM20A) using the optional easy-to-assemble rack mount kits available.

These monitors produce high resolution greater than 1,000 lines, high contrast pictures on either a 9-inch (22 cm), 12-inch (30 cm), 15-inch (38 cm), or 20-inch (50 cm) diagonal screen. The monitors accept 120/230 VAC input and are auto-sensing for EIA/CCIR video format.

The cabinets are made of steel for ruggedness and durability, and with the exception of the picture tube, the circuitry is all solid-state. All models also feature video loop-through connectors with switchable high-Z/75-ohm termination.

Monitor controls are located on the front panel. The PMM9A, PMM12A, and PMM15A have controls for brightness, contrast, vertical and horizontal hold, and AC power. The PMM20A has controls for brightness, contrast, and AC power. Vertical and horizontal hold are controlled internally.

The monitors provide the optimum solution for a variety of CCTV surveillance applications where clear, high quality pictures and proven system reliability are required.



MODEL	A	B	C
PMM9A	9.3 (23.5)	8.7 (22.0)	9.9 (25.2)
PMM12A	12.3 (31.3)	12.2 (31.0)	12.0 (30.5)
PMM15A	12.8 (32.6)	14.3 (36.2)	13.1 (33.2)
PMM20A	18.6 (47.3)	19.3 (49.0)	14.2 (36.1)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 22902  
MANUAL: 229026

C2902 / NEW 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

PMM9A	Monochrome monitor, 9-inch (22 cm) picture display, EIA/CCIR, auto-sensing
PMM12A	Monochrome monitor, 12-inch (30 cm) picture display, EIA/CCIR, auto-sensing
PMM15A	Monochrome monitor, 15-inch (38 cm) picture display, EIA/CCIR, auto-sensing
PMM20A	Monochrome monitor, 20-inch (50 cm) picture display, EIA/CCIR, auto-sensing

## ELECTRICAL

Input Voltage	96-256 VAC, 50/60 Hz, auto-ranging
Power Consumption	
PMM9A	8 watts
PMM12A	30 watts
PMM15A	35 watts
PMM20A	48 watts
Input Signal	0.5 to 2.0 Vp-p, composite video
Input Impedance	75 ohms or high (switchable)
Bandwidth	100 Hz to 10 MHz
Resolution	>1,000 lines
Linearity	
Horizontal	10% maximum
Vertical	10% maximum
Operating System	
EIA	
Horizontal	15,750 Hz $\pm$ 400 Hz
Vertical	60 Hz
CCIR	
Horizontal	15,625 Hz $\pm$ 400 Hz
Vertical	50 Hz

## GENERAL

Environment	Indoor
Construction	Steel cabinet with black plastic front
Finish	Black matte texture coat finish
Picture Tube Dimension	(Measured diagonally)
PMM9A	9 inches (22.86 cm)
PMM12A	12 inches (30.48 cm)
PMM15A	15 inches (38.10 cm)
PMM20A	20 inches (50.80 cm)
Unit Weight	
PMM9A	10.5 lb (4.8 kg)
PMM12A	17.5 lb (7.9 kg)
PMM15A	24.2 lb (10.9 kg)
PMM20A	44.3 lb (20.1 kg)
Shipping Weight	
PMM9A	13 lb (5.9 kg)
PMM12A	20 lb (9.07 kg)
PMM15A	28 lb (12.7 kg)
PMM20A	47 lb (21.3 kg)

## ENVIRONMENTAL

Operating Temperature	32° to 122°F (0° to 50°C)
Storage Temperature	14° to 140°F (-10° to 60°C)
Relative Humidity	10% to 95%, non-condensing

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

RMA901	Rack kit, 10.5" H (6 RUs), for mounting one or two PMM9A monitors in a 19" W (48.26 cm) rack. Includes one blank panel to cover unused opening.
RMA1201	Rack kit, 15.75" H (9 RUs), for mounting one PMM12A monitor in a 19" W (48.26 cm) rack.
RMA1501	Rack kit, 14" H (8 RUs), for mounting one PMM15A monitor in a standard 19" W (48.26 cm) rack.



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## PMC9A Monitor

### 9-INCH COLOR, HIGH RESOLUTION

#### Product Features

- High Resolution
- Front Panel Controls
- Auto-Ranging 100-240 VAC Input
- Auto-Sensing NTSC/PAL
- 2 (BNC) Video Inputs With Looping Outputs
- 2 Audio Inputs With Looping Outputs
- S-Video Input for Separate Y-C Signal
- Rack Mountable
- Built-in Speaker
- 75-Ohm/High-Impedance Auto-Termination
- Internal Lock Synchronization Circuitry Eliminates External Vertical and Horizontal Controls

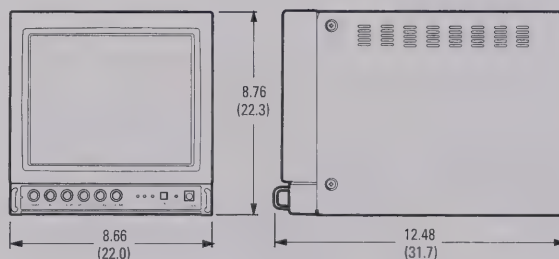


The **PMC9A** high-resolution (350 TV lines) color monitor produces an excellent, quality picture. Great for security installations with minimal space, the compact 9-inch (23 cm) monitor is designed to fit on a small desktop or a rack where space is a consideration.

The **PMC9A** has an auto-ranging, auto-sensing input signal of 100-240 VAC, NTSC/PAL. The internal ranging/sensing system automatically detects input voltage and frequency upon power up. Manual selection is not required.

The back panel of the **PMC9A** features two BNC video inputs with looping outputs, two audio inputs and outputs, and S-video compatibility. All image adjustment controls (brightness, color, and contrast) are conveniently located on the front panel of the monitor.

The **PMC9A** is suitable for specialized and industrial CCTV surveillance applications where clear, high quality pictures and proven system reliability are required. The monitor is also ideal for use with time-lapse and event-alarm VCR systems or color video multiplexers.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHER VALUES ARE INCHES.



**DataFAX**  
**SPEC:** 21909  
**MANUAL:** 219096

C1909 / REVISED 2-03



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

PMC9A Color monitor, 9-inch (23 cm) picture display, NTSC or PAL (auto-sensing)

## ELECTRICAL

Input Voltage	100-240 VAC auto-switching, 50/60 Hz auto-ranging
Power Consumption	40 watts
Display Tube	High resolution, 9-inch (23 cm) diagonal
Viewing Diagonal	8.9 inches (22.5 cm)
Resolution	350 TV lines minimum, 300 TV lines typical
Video Input	1 Vp-p composite video, sync negative
Synchronization	Internally derived
Sweep Linearity	10%
Total Geometric Distortion	<3%
Speaker Output	1.0 watt (-3 dBV)

## GENERAL

Input/Output	
Video	2 BNC inputs, 75 ohms or Hi-Z 2 looping outputs
Audio	2 RCA inputs, Hi-Z 2 looping outputs
S-Video	1 input DIN
Construction	Steel cabinet
Finish	Black with black bezel around screen
Dimensions	8.66" W x 8.76" H x 12.48" D (22.0 x 22.3 x 31.7 cm)
Unit Weight	15.4 lb (7 kg)
Shipping Weight	20 lb (9.06 kg)

## ENVIRONMENTAL

Operating Temperature	32° to 104°F (0° to 40°C)
Humidity	10% to 80% relative, non-condensing

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED MOUNTS

RMJ9UC	Rack kit, 10.42" H (6 RUs), for mounting one or two PMC9A monitors in a 19" W rack. Includes one blank panel to cover unused opening.
--------	---



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# PMC10A Monitor

## 10-INCH COLOR, HIGH RESOLUTION

### Product Features

- High Resolution
- Front Panel Controls
- Auto-Ranging 100-240 VAC Input
- Auto-Sensing NTSC/PAL
- Built-in Speaker
- Video and Audio Input and Output
- S-VHS Input for Separate Y-C Signals
- Rack Mountable (Single Only)

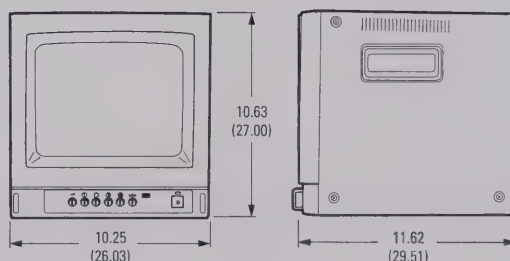


The **PMC10A** high-resolution (350 TV lines) color monitor produces an excellent, quality picture. Great for security installations with minimal space, the compact 10-inch monitor is designed to fit on a small desktop or in a tight rack mount.

The **PMC10A** has an auto-ranging, auto-sensing input signal of 100-240 VAC, NTSC/PAL. The internal ranging/sensing system automatically detects input voltage and frequency upon power up. Manual selection is not required.

The back panel of the **PMC10A** features one BNC video input with looping output, one audio input and output, and S-video compatibility. All image adjustment controls (brightness, color, and contrast) are conveniently located on the front panel of the monitor.

The **PMC10A** is ideal for use with time-lapse and event-alarm VCR systems or color video multiplexers.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 21992  
MANUAL: 219926

C1992 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001





## MODEL

PMC10A Color monitor, 10-inch (25.40 cm) picture display, NTSC or PAL (auto-sensing)

## ELECTRICAL

Input Voltage	100-240 VAC, 50/60 Hz auto-ranging
Power Consumption	49 watts
Horizontal Resolution	350 TV lines
Visual Picture Size	10-inch diagonal
Sweep Linearity	10%
Speaker Output	1.0 watt (-3 dBV)

## GENERAL

Connectors	
Video	1 input BNC, 75 ohms, or Hi-Z 1 loop-through output
Audio	1 input RCA, Hi-Z 1 loop-through output
S-Video	1 input DIN 1 loop-through output
Construction	Steel cabinet
Finish	Black with black bezel around screen
Dimensions	10.25" W x 10.63" H x 11.625" D (26.03 x 27.00 x 28.86 cm)
Weight	19 lb (8.6 kg)

## ENVIRONMENTAL

Operating Temperature	32° to 106°F (0° to 41°C)
Humidity	0% to 90%, non-condensing

## CERTIFICATIONS

- CE, Class B
- ETL listed
- ETL listed for Canada
- FDA
- EMI compliance
- FCC, Class B

## RECOMMENDED MOUNTS

RMQ10T	Bolt on rack ears (6 RUs) with handles for PMC10A monitor. Adapts monitor to standard 19" W (48.26 cm) rack.
RMA10T	Rack kit (7 RUs) for mounting one PMC10A monitor in a 19" W (48.26 cm) rack.



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## PMC14H Monitor

### 14-INCH COLOR, HIGH RESOLUTION

#### Product Features

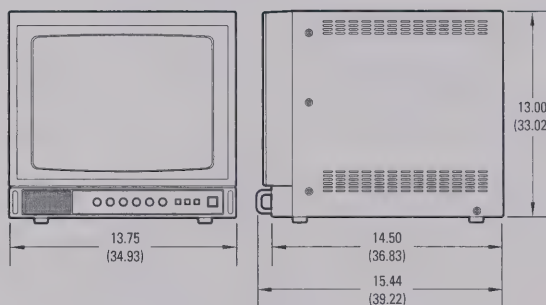
- High Resolution
- 100% Steel Housing
- Front Panel Controls
- 110-240 VAC, 50/60 Hz, Auto-Ranging
- Auto-sensing NTSC/PAL
- Built-in Speaker
- Video and Audio Input and Output
- S-VHS Input for Separate Y-C Signals
- Digital Comb Filter for Significantly Improved Picture Quality
- Rack Mountable



The **PMC14H** is a high-resolution color video monitor (450 horizontal lines at center) that can be used in desktop applications or rack mounted using the optional easy-to-assemble rack mount kit.

The **PMC14H** supports both NTSC and PAL video, as well as 120 VAC and 230 VAC input power. The unit is supplied with two grounded power cords: one for 120 VAC and one for 230 VAC. An automatic switching system makes all the necessary changes for adapting to the required formats. Manual selection is not required.

The back panel of the **PMC14H** has two BNC video inputs with looping outputs, one S-Video input, and multiple audio inputs with looping outputs (for installations where audio monitoring is required). The monitor also features digital comb filter for superior picture quality and conveniently located front panel image adjustment controls (brightness, color, and contrast).



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 22906  
MANUAL: 229066

C2906 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

PMC14H

Color monitor, 14-inch (35.56 cm) picture display

## ELECTRICAL

Input Voltage	110-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	45 watts
Horizontal Resolution	450 lines (center)
Picture Tube	14 inches (35.56 cm) measured diagonally
Effective Picture Size	
Height	8.27 inches (21.0 cm)
Width	11.0 inches (28.0 cm)
Input Signal	Composite video, negative synch:
	Y : 1.0 Vp-p
	C : 0.286 Vp-p
Signal Format	NTSC/PAL, auto-sensing
Terminals	
Video Input Level/Impedance	1 Vp-p/75 ohms
Video Output Level/Impedance	1 Vp-p/75 ohms
Audio Input Level/Impedance	1 Vp-p/75 ohms
Audio Output Level/Impedance	1 Vp-p/75 ohms
Subcarrier Frequency	
Sync Range	
NTSC	15743 Hz
PAL	15625 Hz
High Voltage	23.5 KV $\pm$ 500 V
Convergence	<1.0 mm (at center of picture) <1.4 mm (at corners of picture)
Brightness	More than 250 lux in 100% white signal picture at center
Total Geometric Distortion	< 3%

## GENERAL

Connectors	
Video A	BNC input with looping BNC output
Video B	BNC input with looping BNC output
S-Video	4-pin mini DIN input
Audio	3 RCA inputs with looping RCA outputs
Construction	Steel cabinet
Finish	Black with black bezel around screen
Unit Weight	30.6 lb (14 kg)
Shipping Weight	34 lb (15.4 kg)

## ENVIRONMENTAL

Operating Temperature	32° to 106°F (0° to 41°C)
Humidity	0% to 90%, non-condensing

## CERTIFICATIONS

- CE, Class B
- UL Listed
- CSA
- FCC, Class A

## RECOMMENDED MOUNTS

RMA14F	Rack kit (8 RUs) for mounting one monitor in a 19" W (48.26 cm) rack.
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## PMC21A Monitor

### 21-INCH COLOR, HIGH RESOLUTION

#### Product Features

- High Resolution
- 100% Steel Housing
- Front Panel Controls
- 110-240 VAC Input
- Built-in Speaker
- Video and Audio Input and Output
- S-VHS Input for Separate Y-C Signals
- Digital Comb Filter for Significantly Improved Picture Quality
- Automatic Color Sensing System (PAL/NTSC)
- Handles Facilitate Rack Mounting

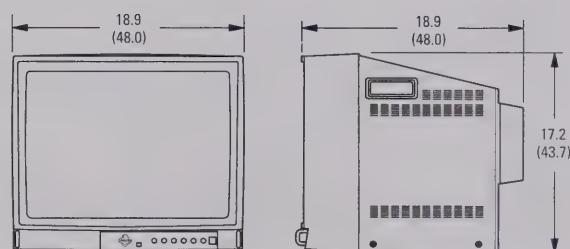


The **PMC21A** is a high-resolution color video monitor that can be used in desktop applications or rack mounted using the optional bezel, which is a standard accessory included with each monitor. The monitor comes with handles on the lower front to facilitate ease of handling when installing in a rack. The monitor occupies 11 rack units when mounted in a standard 19-inch rack or console.

The **PMC21A** supports both NTSC and PAL video, as well as 120 VAC and 230 VAC input power. For your convenience, the unit is supplied with two grounded power cords: one for 120 VAC and one for 230 VAC. An automatic switching system makes all the necessary changes for adapting to the required formats. Manual selection is not required.

In addition, the **PMC21A** features audio input and output. The monitor's S-VHS, high-resolution video (minimum 420 horizontal lines at center), and digital comb filter add to the superior picture quality features of the product.

This monitor works very well in both large and small applications.

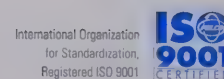


NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 21959  
MANUAL: 219596

C1959 / REVISED 10-03



## MODEL

PMC21A

Color monitor, 21-inch (53.34 cm) picture display, NTSC or PAL, auto-sensing

## ELECTRICAL

Input Voltage

110-240 VAC, 50/60 Hz, auto-ranging

Power Consumption

70 watts

Horizontal Resolution

420 lines (center)

300 lines (corners)

Picture Tube

21 inches (53.34 cm) measured diagonally

Viewable Picture Size

20.5 inches (52.07 cm) measured diagonally

Total Geometric Distortion

<3%

Input Signal

Composite video, negative sync:

Y : 1 Vp-p

C : 0.286 Vp-p

Terminals

Video Input Level/

Impedance

1 Vp-p/75 ohms

Video Output Level/

Impedance

1 Vp-p/75 ohms

Audio Input Level/

Impedance

0.3 Vrms/25 kohms (over)

Audio Output Level/

Impedance

0.3 Vrms/4.7 kohms (under)

Subcarrier Frequency

3.579549 MHz  $\pm$ 200 Hz

Sync Range

4.433619 MHz  $\pm$ 200 Hz

at room temperature

High Voltage

25  $\pm$ 1.2 kV

## GENERAL

Connectors

Video Input/Output

BNC

S-VHS Input

4-pin mini DIN

Audio Input/Output

RCA

AC Power Cord

Unit is supplied with 2 grounded power cords;

1 for 120 VAC and 1 for 230 VAC

Construction

Steel cabinet

Finish

Black with black bezel around screen

Unit Weight

52 lb (23.6 kg)

Shipping Weight

62 lb (28.1 kg) approximate

## ENVIRONMENTAL

Operating Temperature

32° to 106°F (0° to 41°C)

Humidity

10% to 95%, non-condensing

## CERTIFICATIONS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A

## MOUNTING

This monitor can be rack mounted using the optional rack bezel supplied with monitor. Rack bezel fits snugly around monitor cabinet, with face of monitor protruding approximately 4.8 inches (12.2 cm) from front of rack. When rack mounted, this monitor occupies 11 rack unit spaces.

Make certain the console is capable of supporting the full weight of the monitor and will not become unbalanced or unstable when monitor is racked.

## OPTIONAL MOUNTS

MR5000L

Viewing system ceiling monitor mount



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## PMCS14A, PMCS17A, and PMCS19A Monitors

### 14-/17-/19-INCH COLOR, SUPER-HIGH RESOLUTION

#### Product Features

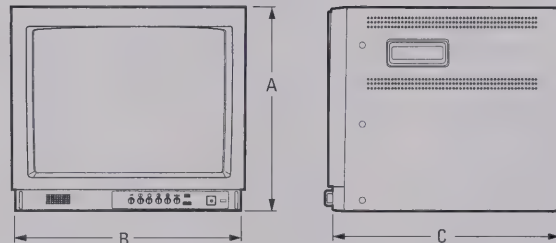
- Super-High Resolution
  - PMCS14A and PMCS17A - 700 TV Lines
  - PMCS19A - 800 TV Lines
- Computer Grade Picture Tube
- Front Panel Controls
- Auto-Ranging 90-260 VAC Input
- Auto-Sensing NTSC/PAL
- Built-in Speaker
- Video and Audio Input and Output
- S-VHS Input for Separate Y-C Signals
- Rack Mountable



If your application demands crisp, detailed images, Pelco's super-high resolution monitors are the best choice for you. The **PMCS14A**, **PMCS17A** and **PMCS19A** monitors have a computer grade picture tube capable of producing a horizontal resolution of 700/800 TV lines. Standard high-resolution monitors produce only about 350 TV lines.

The super-high resolution of the **PMCS14A**, **PMCS17A** and **PMCS19A** allow you to take full advantage of today's digital imaging surveillance equipment including S-video output devices, like Pelco's Genex® Series multiplexer.

The **PMCS14A**, **PMCS17A**, and **PMCS19A** can be used in desktop applications or rack mounted. Controls for brightness, color, contrast, and volume are located on the front of the monitor. The monitors support NTSC and PAL video formats, as well as 120 VAC and 230 VAC input power.



MODEL	A	B	C
PMCS14A	12.87 (32.69)	14.00 (35.56)	15.00 (38.10)
PMCS17A	14.50 (36.83)	16.00 (40.64)	16.00 (40.64)
PMCS19A	16.00 (40.64)	17.37 (44.13)	17.50 (44.45)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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**DataFAX**  
SPEC: 21991  
MANUAL: 219916

C1991 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

PMCS14A	Color monitor, 14-inch (35.56 cm) picture display, NTSC or PAL, auto-sensing
PMCS17A	Color monitor, 17-inch (43.18 cm) picture display, NTSC or PAL, auto-sensing
PMCS19A	Color monitor, 19-inch (48.26 cm) picture display, NTSC or PAL, auto-sensing

## ELECTRICAL

Input Voltage	90-260 VAC, 50/60 Hz auto-ranging
Power Consumption	
PMCS14A	60 watts
PMCS17A	95 watts
PMCS19A	90 watts
Horizontal Resolution	
PMCS14A	700 TV lines
PMCS17A	700 TV lines
PMCS19A	800 TV lines
Viewable Picture Size	
PMCS14A	13-inch diagonal
PMCS17A	16-inch diagonal
PMCS19A	18-inch diagonal
Sweep Linearity	10%
Speaker Output	1.0 watt (-3 dBV)

## GENERAL

Input/Output	
Video	2 inputs, BNC, 75 ohms or Hi-Z 2 loop-through outputs
Audio	2 inputs, RCA, Hi-Z 2 loop-through outputs
S-Video	1 input, DIN 1 loop-through output
Construction	Steel cabinet
Finish	Black with black bezel around screen
Unit Weight	
PMCS14A	28.6 lb (13 kg)
PMCS17A	41 lb (18.5 kg)
PMCS19A	63 lb (28.5 kg)
Shipping Weight	
PMCS14A	36 lb (16.3 kg)
PMCS17A	48 lb (21.7 kg)
PMCS19A	71 lb (32.2 kg)

## ENVIRONMENTAL

Operating Temperature	32° to 106°F (0° to 41°C)
Humidity	0% to 90%, non-condensing

## CERTIFICATIONS

- CE, Class B
- ETL listed
- ETL listed for Canada
- FDA
- EMI compliance
- FCC, Class B

## RECOMMENDED MOUNTS

RMQ14T	Bolt on rack ears (7 RUs) with handles for PMCS14A monitor. Adapts monitor to standard 19" EIA rack.
RMQ17T	Same as RMQ14T except for use with PMCS17A monitor (8 RUs).
RMA14T	Rack kit (8 RUs) for mounting one PMCS14A monitor in a 19" W (48.26 cm) rack.
RMA17T	Rack kit (9 RUs) for mounting one PMCS17A monitor in a 19" W (48.26 cm) rack.
RMA19T	Rack kit (10 RUs) for mounting one PMCS19A monitor in a 19" W (48.26 cm) rack.
MR5000M	Viewing system ceiling monitor mount for PMCS14A and PMCS17A monitors.
MR5000L	Viewing system ceiling monitor mount for PMCS19A monitor.

Indicates change or addition.



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**USA & Canada** Tel: (800) 289-9100 • FAX (800) 289-9150 • DataFAX (800) 289-9108

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# PMCL15A Flat Panel, TFT LCD Monitor

## 15-INCH COLOR, HIGH RESOLUTION

### Product Features

- High Resolution, 540 TV Lines (Composite Video Mode)
- Space-Saving, Flat Panel Design
- On-Screen Display for Setup and Adjustment of Monitor Parameters
- Multiple Video Inputs (Front Panel Switchable)
- PC Compatible Inputs
- Built-in Auto Input Scanning
- 90-260 VAC, 50/60 Hz Input, Auto-Ranging
- Built-in Speaker
- Video and Audio Input and Output

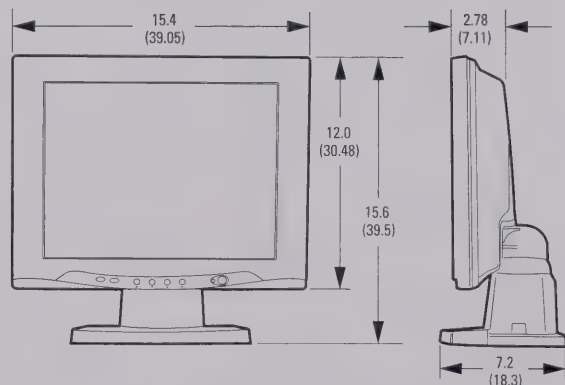


Pelco's **PMCL15A** thin film transfer (TFT) LCD panel has an overall depth of less than 3 inches (7.6 cm), making it ideal for security installations with limited space.

With a resolution of 540 TV lines, the **PMCL15A** produces a sharp picture. The LCD panel features dual video inputs for S-video and PC-based imaging to take full advantage of today's digital surveillance equipment.

**PMCL15A's** input circuitry supports NTSC/PAL formats and input voltages of 90-260 VAC. Efficiently designed, the unit consumes 60 percent less power than a conventional CRT monitor.

Other features include a long-life fluorescent backlight, built-in auto input scanning and on-screen display with multiple language capabilities. On-screen programmable image controls are adjustable using menu buttons conveniently located on the front panel of the unit.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 21965  
MANUAL: 219656

C1965 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

PMCL15A High resolution 15-inch (38.1 cm) TFT LCD flat panel

## ELECTRICAL

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	Maximum 35 watts
Input/Output Signal	1 Vp-p composite video signal
Input/Output Impedance	75 ohms
Scanning Frequency	
NTSC	15750 Hz $\pm$ 500 Hz at 60 Hz
PAL	15625 Hz $\pm$ 500 Hz at 50 Hz
Connectors	
Video Input/Output	BNC
S-VHS Input	4-pin mini DIN
PC Input	15-pin connector
Audio Input/Output	RCA
AC Power Cord	Unit is supplied with 2 grounded power cords; 1 for 120 VAC and 1 for 230 VAC

## GENERAL

Environment	Indoor
Construction	Black plastic
Finish	Black matte texture coat finish
LCD Panel	
Type	15-inch (38.1 cm) TFT color
Colors	16.7 million colors
Viewable Size	12 (H) x 9 (V) inches (30.48 x 22.86 cm)
Contrast Ratio	300:1
Brightness	350 cd/m <sup>2</sup>
Resident Resolution	1024 x 768
Dimensions	
LCD Panel Only:	12.0" H x 15.4" W x 2.78" D (30.48 x 39.05 x 7.11 cm)
LCD Panel with Base:	15.6" H x 15.4" W x 7.2" D (39.5 x 39.05 x 18.3 cm)
Unit Weight	11.2 lb (5 kg)
Shipping Weight	16 lb (7.26 kg)

## ENVIRONMENTAL

Operating Temperature	50° to 104°F (10° to 40°C)
Humidity	20% to 85%, non-condensing

## CERTIFICATIONS

- CE, Class B
- ETL listed to ANSI/UL 1950-1997
- cETL listed to CAN/CSA C22.2 No.950-95
- FCC, Class B

Indicates change or addition.



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## PMCQ14A Quad Monitor

### 14-INCH COLOR (NTSC)

#### Product Features

- Four Video Inputs for Cameras or VCRs
- Single-Camera or Four-Camera Displays
- Camera Sequencing with Programmable Dwell Time for Each Camera
- Alarm Inputs for Each Camera
- Video Output for Recording
- Alarm Output to Trigger VCR
- 2X Digital Zoom and Freeze Functions
- Camera ID, and Date and Time Displays
- Video Loss Detection
- Optional Camera with Audio Available



Pelco's **PMCQ14A** is a versatile, easy to install, color quad monitor capable of simultaneous or sequential viewing of four video inputs.

The monitor has four BNC inputs for cameras or VCRs. Front panel buttons on the monitor select a full-screen view of any video input or a multiple-screen view of all four inputs. The multiple-screen view can be either a quad display or a picture-in-picture (PIP) display. The PIP display shows one input in full-screen mode and the other three inputs as insets.

Other features allow you to sequence camera views, zoom in on a camera, and freeze a view on the monitor screen.

Programming from the front panel lets you change the camera identification, time, and date that appear on the monitor screen.

If you wish to record what is shown on the monitor screen, you can connect a VCR to a monitor output.

If you prefer a more complete system, an optional camera designed specifically for this monitor is available. The camera includes a lens, mounting bracket, and 60-foot (18.3 m) cable. The camera can be purchased separately, or system kits are available with a monitor and one to four cameras.

The optional camera adds additional versatility to the monitor. The camera has a mini-DIN connector that plugs into a mating connector on the monitor. When this camera is used, this leaves the BNC video connector available for use as a looping output.

The camera includes audio and alarm features. The audio feature lets the camera capture sound as well as video, and the alarm function allows alarm contacts to be connected to the camera rather than run all the way to the monitor. The audio and alarm combination also can be used as an intercom system. The alarm lets you install a "call" button near the camera so that a person on camera can get the attention of the observer. Built-in microphones and speakers on the camera and monitor permit the person on camera and the person watching the monitor to communicate verbally with each other.

12 VDC power for the camera is supplied through the mini-DIN connector.

The **PMCQ14A** makes full-color security monitoring an economical reality.



**DataFAX**  
SPEC: 21969  
MANUAL: 219686

C1969 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



MONITORS  
QUAD, COLOR

# TECHNICAL SPECIFICATIONS

## MODEL

PMCQ14A 14-inch color quad monitor

## RELATED PRODUCTS

CCQ1400A-KIT Camera assembly with audio (includes camera, lens, mounting bracket and 60-foot cable).

CCQCABLE-100EXT 100-foot extension cable for use with CCQ1400A-KIT only. (Only two per cable run.)

PMCQ14KIT-A System kit, consisting of one PMCQ14A quad monitor and one CCQ1400A-KIT camera assembly with audio.

PMCQ14KIT-A2 Same as PMCQ14KIT-A except supplied with two camera assemblies.

PMCQ14KIT-A3 Same as PMCQ14KIT-A except supplied with three camera assemblies.

PMCQ14KIT-A4 Same as PMCQ14KIT-A except supplied with four camera assemblies.

## MONITOR

### ELECTRICAL

Input Voltage 100 to 240 VAC, 50/60 Hz

Power Consumption 70 watts

Signal Format NTSC

Scanning System 2:1 interlace

Picture Elements 512 (H) X 492 (V)

Horizontal Resolution 350 TV lines (center)

Linearity Less than 12%

Total Geometric Distortion <3%

Audio Output 1.1 W  $\pm$  0.2 W at 8-ohm resistive load

Pixel Format

- Single Screen 720 (H) x 480 (V)
- Quad Screen 360 (H) x 240 (V)
- PIP Screen 208 (H) x 136 (V)

Refresh Rate 30 frames per second (NTSC)

Digital Zoom 2X

OSD Character 16 x 20 bit map font (upper case letters, numbers, and symbols)

Video Switching Time 1 second (during multiple alarms)

Maximum Character

Display Format 45 (H) x 24 (V) (1,080 characters)

### GENERAL

Picture Tube 14-inch diagonal

Controls Sharpness, color, brightness, contrast, tint, and volume

Character Display 8 alphanumeric characters for each camera, date, time, alarm, video loss, and freeze

Display Modes One camera, four cameras (quad), picture-in-picture (PIP), and VCR

Sequential Switching Mode Set dwell time from 1 to 30 seconds; off setting skips channel

Video Loss Detection All channels

Time Mode 12-hour mode with AM/PM indicator

Alarm Inputs 4, activated by N.O. or N.C. contact closure (programmable)

Alarm Output 1, common to all 4 inputs. TTL compatible (programmable for high or low output)

Alarm Beep On or off (programmable)

Automatic Alarm Reset Set reset time from 1 to 60 seconds; off setting defeats auto reset (programmable)

### Connectors

Video/Audio Input 4X6P, mini-DIN

Video Input 4, BNC

Video Looping 4, BNC

Monitor Output 1, BNC

VCR Input/Output 4, RCA (2 video and 2 audio)

Remote Port DB9 male

Alarm 10-position, snap-in type (push-in wire)

Impedance Termination 75 ohms or bridging for 4 video inputs (from cameras) and 1 monitor output

Dimensions 12.75" H x 13.68" W x 14.68" D (32.38 x 34.75 x 37.29 cm)

Unit Weight 28.6 lb (13 kg)

Shipping Weight 32 lb (14.5 kg)

### ENVIRONMENTAL

Operating Temperature 32° to 104°F (0° to 40°C)

Storage Temperature 4° to 158°F (-20° to 70°C)

Humidity 35% to 80%, non-condensing

## OPTIONAL CAMERA KIT (Model CCQ1400A-KIT)

### ELECTRICAL

Input Voltage 12 VDC,  $\pm$ 2 VDC

Power Consumption 2 watts

Signal Format NTSC

Scanning System 2:1 interlace

Sync System Internal

Horizontal Resolution 330 TV lines (center)

Image Size Area 0.18" (H) x 0.15" (V) (0.45 x 0.39 cm)

Picture Elements 512 (H) X 492 (V)

Electronic Iris 1/60 to 1/100,000 second

Video Output 1 Vp-p,  $\pm$ 10%, 75 ohms

Auto White Balance Electronic auto tracking

Minimum Illumination 0.9 lux at 30 IRE, f1.2

### GENERAL

Lens C/CS mount, f2.0, 4 mm lens

Dimensions 2.00" W x 4.00" L x 2.38" H (5.08 x 10.16 x 6.05 cm)

Unit Weight 0.5 lb (0.22 kg)

Shipping Weight 1 lb (0.45 kg)

### ENVIRONMENTAL

Operating Temperature 14° to 131°F (-10° to 55°C)

Storage Temperature 4° to 158°F (-20° to 70°C)

Humidity 35% to 80%, non-condensing

## CERTIFICATIONS

- CE, Class A
- UL Listed
- cUL listed to Canadian safety standards
- FCC, Class A

## RECOMMENDED MOUNT

RMA14F Rack kit (8 RUs) for mounting a single monitor in a standard 19" EIA rack. Black polyester powder coat finish.

Indicates change or addition.



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## CONTROLS

### Simple System Controls

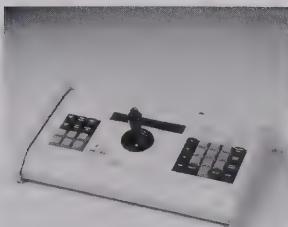


#### Direct/Multi-cable Control

Pelco's direct/multi-cable controls are a cost effective way to operate the simplest CCTV systems. Available models include zoom/lens functions only, pan/tilt functions only, and pan/tilt and zoom functions.

#### Coaxitron® Control

Pelco Coaxitron® controls are versatile transmitters/controllers that eliminate the need for separate control wiring for the transmitter and receiver in a surveillance system. Perfect for applications with distances up to 1,500 feet (457m), the units control pan/tilt and camera functions by transferring control and video information on the same coaxial cable. Coaxial cable is a reliable, convenient, and trouble-free way of transferring video images in a CCTV system. Coaxitron reduces installation costs by eliminating the need to run additional wiring for transmission and control functions.



#### Coaxitron/Digital Control

A microprocessor based transmitter/controller designed to work with RS-485 or Coaxitron receivers. Full pan/tilt and zoom control, including variable speed. Can operate up to 32 receivers.



#### Digital Control

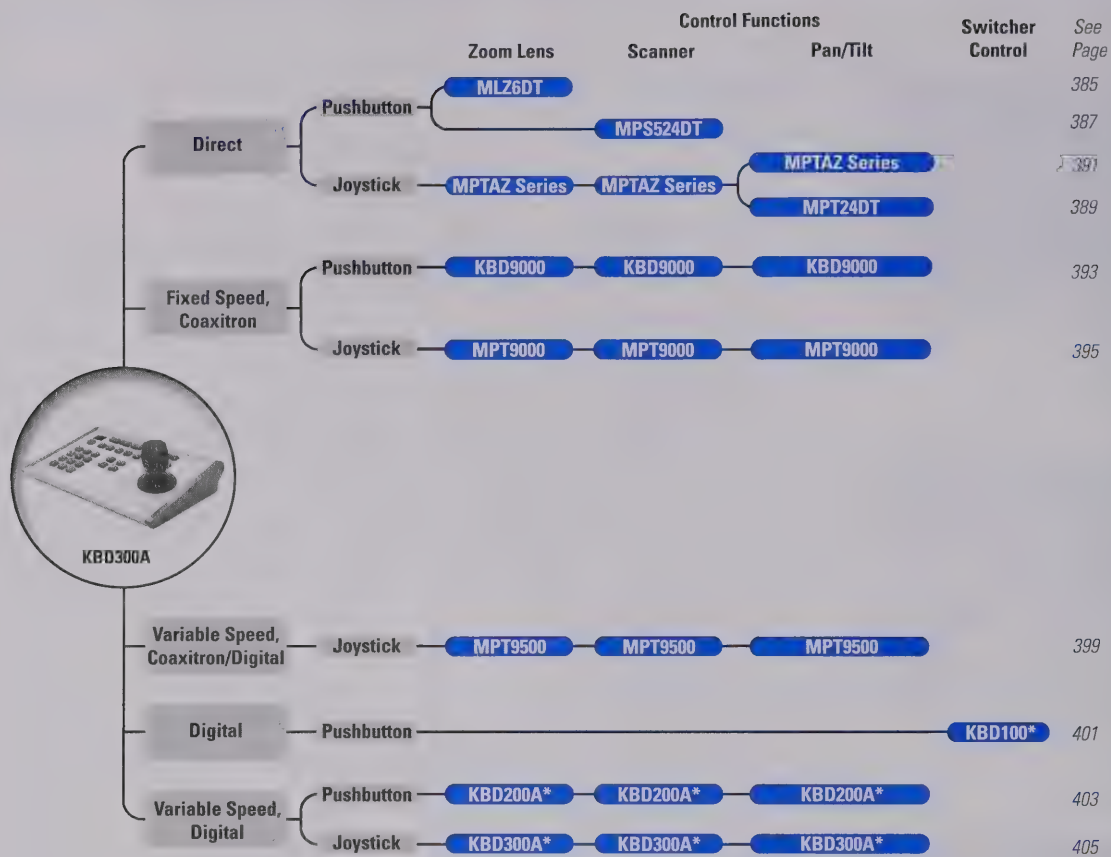
Pelco's KBD200A and KBD300A are the perfect digital controls to operate Pelco's 6700/6800 matrix switchers. The keyboards can also be configured for direct mode operation with a direct mode keyboard wiring kit (KBDKIT). The KBD200A and KBD300A are compatible with RS-422 and Pelco's P protocol. The KBD100 digital control is also for use with 6700/6800 matrix switchers and provides basic switcher control functions (no PTZ).

Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Control Selection Guide

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\*Requires KBDKIT for most applications. Refer to specification sheet for details.



## MLZ6DT Control ZOOM LENS, MOTORIZED

### Product Features

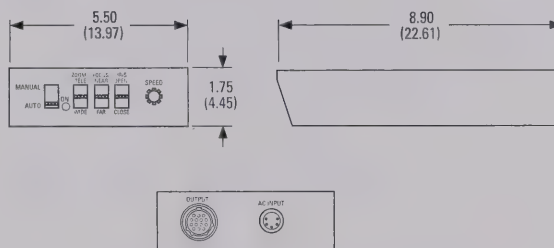
- Solid-State Electronics
- 120 VAC Input
- Supplied with 24 VAC Wall Transformer
- For Use with Motorized Zoom Lenses
- Ideal for Simple, Hard-Wire Control Applications



The **MLZ6DT** lens control is designed to provide remote control for Pelco's motorized zoom lenses. Fully solid-state electronics provide the DC power to smoothly drive zoom, focus, and iris functions.

The **MLZ6DT** is supplied with a 24 VAC wall mount transformer power supply. Front panel switches provide control of zoom and focus functions, with optional manual control of the iris. Speed is adjustable through the front panel knob control.

The **MLZ6DT** is ideal for simple video surveillance applications (single camera and monitor).



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**DataFAX**  
**SPEC:** 2516  
**MANUAL:** 25176

C516 / REVISED 10-03



International Organization  
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## MODELS

MLZ6DT

Desktop zoom lens control module with auto/manual iris control

## CONTROLS

Zoom  
Focus  
Manual Iris  
Auto Iris  
Speed  
On/Off  
Pilot Lamp

Paddle switch TELE/WIDE  
Paddle switch NEAR/FAR  
Paddle switch OPEN/CLOSE  
Paddle switch AUTO/MANUAL  
Knob adjustment  
Rocker switch  
Light emitting diode (LED)

## ELECTRICAL

Input Voltage  
Power Consumption  
Output Voltage  
Circuit  
Power Supply  
Output Connector  
Cable Requirements

120 VAC, 50/60 Hz  
3 to 6 watts  
±2 to 12 VDC  
Full wave power supply with solid-state drive  
24 VAC, 400 mA wall mount transformer  
AMP CPC type, 14 pin (mate supplied)  
Four conductors plus ground; one additional conductor for manual override

Cable Distances

The following distances are approximate maximum recommended under the following conditions:

- Based on a 35 mA load at 9 VDC
- Single lens function activation
- Single common conductor in lens cable
- 10% loss in voltage at the lens motor

22 AWG (0.3 mm <sup>2</sup> )	797 ft (243 m)
20 AWG (0.5 mm <sup>2</sup> )	1,267 ft (386 m)
18 AWG (1.0 mm <sup>2</sup> )	2,015 ft (614 m)

**Note:** Video is limited to 500 feet on RG59/U coax cable without equalization amplifier.

## GENERAL

Construction  
Cover  
Chassis  
Panel

Steel, black polyester powder coat  
Steel, zinc plated  
Aluminum, black polyester powder coat with white silkscreen

Unit Weight  
Shipping Weight

3 lb (1.35 kg)  
5 lb (2.25 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

C06HWC

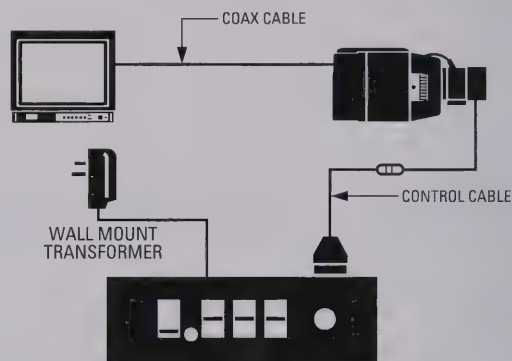
Prewired, 6-foot (1.82 m) interconnecting cable with 14-pin control connector and butt splices on mating end. (Compatible only when not used with the AI701.)

DT200

Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.

R300

Rack mount kit (1 RU) for up to three control modules.



TYPICAL CONFIGURATION



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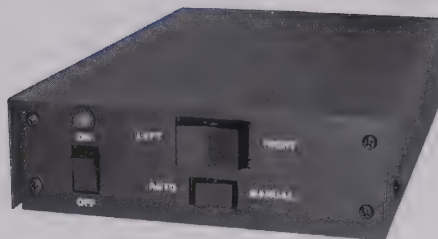
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## MPS524DT Control SCANNER FUNCTIONS

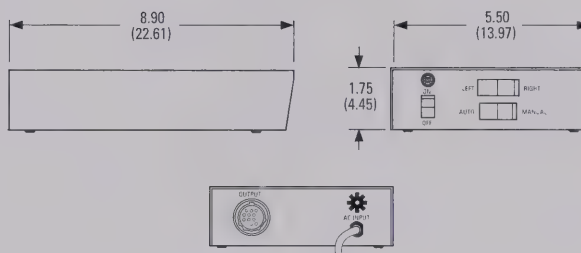
### Product Features

- For PS20-24 Scanner
- 24 VAC Output
- Desktop or Rack Mount
- Continuous Auto Scan or Manual Control



The **MPS524DT** scanner control provides concise, reliable control of Pelco's PS20-24 scanner. Left/right control, as well as auto scan, are easily operated functions of the front panel switches.

The **MPS524DT** is a desktop model; up to three units can be rack mounted utilizing the R300 rack kit or two units can be mounted side-by-side in one chassis using the DT200 dual desktop mount kit.



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DataFAX  
SPEC: 2545  
MANUAL: 25456

C545 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MPS524DT

Desktop control for PS20-24, 24 VAC scanner

## ELECTRICAL

Input Voltage  
Output Voltage  
Power Consumption  
Fuse Protection  
Power Cord  
Output Connector  
Cable Requirements  
Operating Distances

24 VAC, 50/60 Hz  
24 VAC  
20 VA  
1/2 ASB  
3-wire grounded, 18 AWG  
AMP CPC type, 14 pin (mate supplied)  
4 conductors plus ground  
The following are the recommended cable distances between the control and the PS20-24 scanner. The PS20-24 is powered locally and does not use power from the controller.

20 AWG (0.5 mm <sup>2</sup> )	18 AWG (1.0 mm <sup>2</sup> )	16 AWG (1.5 mm <sup>2</sup> )
5,600 ft (1,706 m)	9,000 ft (2,743 m)	14,300 ft (4,368 m)

## CONTROLS

Left/Right  
Auto Scan  
Power  
Pilot Lamp

Rocker switch, LEFT/RIGHT  
Rocker switch, AUTO/MANUAL  
Rocker switch, ON/OFF  
Long life neon

## GENERAL

Construction  
Cover  
Chassis  
Panel

Steel, black polyester powder coat  
Steel, zinc plated  
Aluminum, black polyester powder coat with white silkscreen  
4.87 lb (2.21 kg)  
6.0 lb (2.71 kg)

Unit Weight  
Shipping Weight

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

DT200

Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.

R300

Rack mount kit (1 RU). Up to three units may be racked horizontally in a single rack kit.



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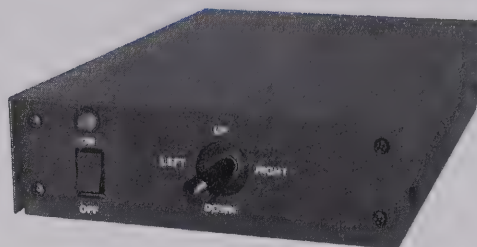


## MPT24DT Control

### PAN/TILT FUNCTIONS

#### Product Features

- Desktop or Rack Mount
- 8-Position Joystick Control for a Single Pan/Tilt
- Manual Scan
- 24 VAC Output

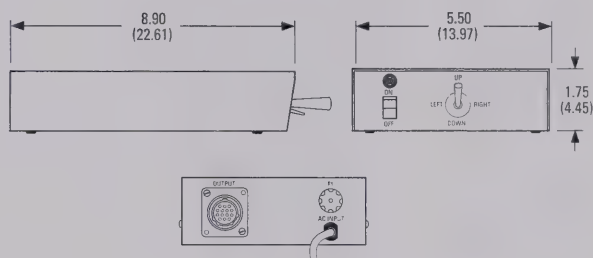


The **MPT24DT** control is designed for use with Pelco's 24 VAC pan/tilts—the PT270-24P, PT280-24P, PT570-24, and PT680-24P. An eight-position joystick controls the up, down, left, and right movements of a single pan/tilt. Movements can be controlled individually or simultaneously (that is, left/down/ left/up, etc.) by positioning the joystick diagonally between the two desired functions.

The compact control is only 5.5 inches (13.97 cm) wide and 8.9 inches (22.61 cm) long, making it an ideal size for placing on a desk without taking up too much space. Two controls can be installed side-by-side on a desk with the DT200 mounting kit. The control also can be mounted in a 19-inch equipment rack with the R300 rack mount kit, which will hold up to three units.

The **MPT24DT** is easy to install: assemble and connect a control cable between the control and the pan/tilt, plug in the power cord, and turn it on. To make the installation easier, an optional 6-foot (1.8 m) prewired control cable is available; the cable has a connector on one end to plug into the **MPT24DT** and butt splices on the other end for making connections to the pan/tilt wiring.

The RB24 relay box can be used to extend the distance between the **MPT24DT** and the pan/tilt.



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DataFAX  
SPEC: 2520  
MANUAL: 25206

C520 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

MPT24DT Desktop joystick control for 24 VAC pan/tilt

**Note:** MPT24DT can also be used to control 120 VAC pan/tilts and scanners when used with RB115 relay box.

## CONTROLS

Pan/Tilt 8-position joystick (up, down, left, right, and simultaneous combinations of pan/tilt functions when joystick is positioned diagonally between two functions)

Power On/off switch

Pilot Lamp Long-life neon

## ELECTRICAL

Input Voltage 120 VAC, 50/60 Hz

Output Voltage 24 VAC

Fuse Protection 1 amp SB

Power Cord 3-wire grounded, 18 AWG

Connectors Amp CPC type, 14-pin (mate supplied)

Conductor Requirements 5 plus ground

Cable Distances Refer to specifications for the specific pan/tilt to be used with the control for cable distances

## GENERAL

Construction

Cover Steel, black polyester powder coat

Chassis Steel, zinc plated

Panel Aluminum, black polyester powder coat with white silkscreen

Environment Indoor; 32° to 120°F (0° to 49°C)

Weight 5 lb (2.27 kg)

Shipping Weight 7 lb (3.17 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- FCC, Class B
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

C06HWC Prewired, 6-foot (1.82 m) interconnecting cable with 14-pin control connector and butt splices on mating end.

DT200 Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.

R300 Rack mount kit (1 RU) for up to three modules. Blank filler panels provided for less than three modules. (Factory racking available for R300 rack kit only. Specify when ordering.)

RB24 Relay box for 24 VAC pan/tilts and scanners. Extends operating distance (control to relay box) up to a maximum of 13,000 feet (3,962 m) utilizing 16 AWG. For use with 24 VAC output controls.

RB115 Relay box for 120 VAC pan/tilts and scanners. Extends operating distance (control to relay box) up to a maximum of 13,000 feet (3,962 m) utilizing 16 AWG. For use with 24 VAC output controls.

Indicates change or addition.



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## MPTAZ Series Control

### PAN/TILT, SCANNER, AND LENS FUNCTIONS

#### Product Features

- Desktop or Rack Mount
- For use with 24 VAC and 120 VAC Pan/Tilts or Scanners
- AMP CPC-Type Connector Used for 120 VAC Models; Terminal Strip Supplied for 24 VAC Models
- Capable of Auto/Random Scan Operation

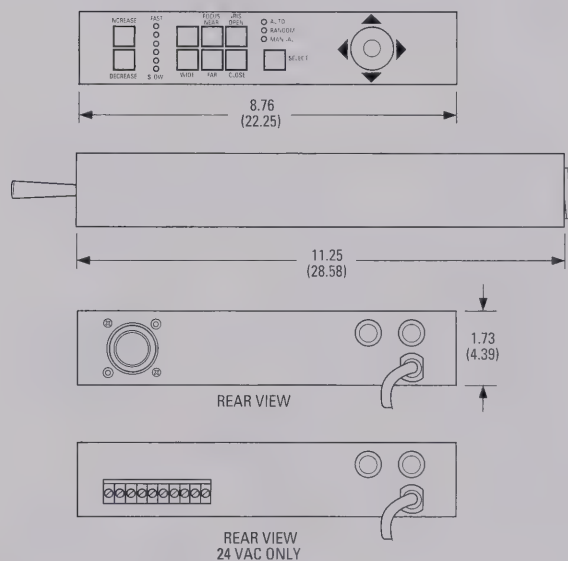


The **MPTAZ115DT** and **MPTAZ224DT** integrate pan/tilt, scanner and motorized zoom lens functions into one desktop control and are for use with 120 VAC and 24 VAC pan/tilts or scanners. This convenient control is also capable of auto/random scan operation. Random scan helps to increase the equipment life because its shorter duty cycle reduces gear train and drive motor wear, cable fatigue, and motor temperature rise. Auto scan operates with a time delay that automatically returns to random scan after approximately 30 minutes. In addition, the control offers an auto scan output pin for Pelco scanners. This output pin allows a scanner to auto scan when the unit is either in the random or auto setting. The control will operate a scanner in the manual mode using the left/right functions of the joystick.

Pan/tilt movements are controlled by an eight-position joystick control. Lens functions and speed are controlled by eight momentary push-button switches.

As with other Pelco controls, 24 VAC models can be used in conjunction with our RB24, RB115 or RB220 relay box to increase the operating distance (control to relay box).

An optional rack mount kit (R400) for mounting two control modules side-by-side is available. A blank filler plate is provided for applications using one control.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2528  
MANUAL: 25286

C528 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

MPTAZ115DT	Desktop joystick control for 120 VAC pan/tilts, scanners, and Pelco motorized zoom lenses
MPTAZ24DT	Desktop joystick control for 24 VAC pan/tilts, scanners, and Pelco motorized zoom lenses
MPTAZ24DT/220	Same as MPTAZ24DT except 230 VAC input voltage

## CONTROLS

Zoom	Push-button momentary switch ZOOM TELE ZOOM WIDE
Focus	Push-button momentary switch NEAR FAR
Iris	Push-button momentary switch OPEN CLOSE
Lens Speed	Push-button momentary switch INCREASE DECREASE
Pan/Tilt	Joystick, 8-position (Up, down, left, right, and simultaneous combinations of pan/tilt functions)
Auto/Random Select	Push-button momentary switch SELECT
Indicator Lamps	Light emitting diode

## ELECTRICAL

Input Voltage	
MPTAZ115DT,	
MPTAZ24DT	120 VAC, 50/60 Hz
MPTAZ24DT/220	230 VAC, 50/60 Hz
Output Voltage	
MPTAZ24DT,	
MPTAZ24DT/220	24 VAC
MPTAZ115DT	120 VAC
Lens Voltage	0-12 VDC
Fuse Protection	
MPTAZ115DT,	
MPTAZ24DT	1 ASB
MPTAZ24DT/220	0.5 ASB
Power Cord	3-wire grounded, 18 AWG
Connectors	
MPTAZ115DT	AMP CPC-type
MPTAZ24DT,	
MPTAZ24DT/220	10-position terminal strip
Conductor Requirements	(No additional conductors required for auto/random scan operation) 9 plus ground for MPTAZ115DT (when used with pan/tilt and lens) 8 plus ground for MPTAZ115DT (when used with scanner and lens) 9 and no ground for MPTAZ24DT or MPTAZ24DT/220 (when used with pan/tilt and lens) 8 and no ground for MPTAZ24DT or MPTAZ24DT/220 (when used with scanner and lens)

## Cable Distances

Pan/Tilt	Refer to specifications for the specific pan/tilt to be used with the control.
Lens	The following distances are approximate maximum recommended under the following conditions:

- Based on a 35 mA load at 12 VDC
- Single lens function activation
- 10% line loss in voltage at the lens motor

22 AWG (0.3 mm <sup>2</sup> )	1,062 feet (323 meters)
20 AWG (0.5 mm <sup>2</sup> )	1,688 feet (514 meters)
18 AWG (1.0 mm <sup>2</sup> )	2,686 feet (818 meters)

**Note:** Video is limited to 500 feet on RG59/U coaxial cable without equalization amplification.

## GENERAL

Construction	
Cover	Steel, black polyester powder coat
Chassis	Steel, zinc plated
Panel	Aluminum, black polyester powder coat with white silkscreen
Unit Weight	
MPTAZ115DT	5.17 lb (2.34 kg)
MPTAZ24DT	6.48 lb (2.94 kg)
MPTAZ24DT/220	6.59 lb (2.99 kg)
Shipping Weight	
MPTAZ115DT	7 lb (3.17 kg)
MPTAZ24DT	8 lb (3.62 kg)
MPTAZ24DT/220	9 lb (4.07 kg)

## CERTIFICATIONS

- CE, Class A (MPTAZ24DT/220)
- FCC, Class A (MPTAZ115DT, MPTAZ24DT)

## OPTIONS

R400	Rack mount kit (1 RU) for MPTAZ series controls. Two controls can be racked together; blank filler plate provided for less than 2 modules.
RB115	Relay box for 120 VAC pan/tilts and scanners. Extends operating distance (control to relay box) up to a maximum of 13,000 feet (3,962 m) utilizing 16 AWG. Use with 24 VAC output controls.
RB24	Same as RB115 except for use with 24 VAC pan/tilts and scanners.
RB220	Same as RB115 except for use with 230 VAC pan/tilts and scanners.

Indicates change or addition.



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[www.pelco.com](http://www.pelco.com)

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## KBD9000 Transmitter/Controller

### FIXED SPEED, COAXITRON®, DESKTOP

#### Product Features

- Low Cost
- 120 VAC Input
- Reliable, Flexible
- Fixed Speed (15-Bit) Coaxitron® Compatibility
- Single Coaxial Cable Controls All Functions
- Control Functions Include Pan/Tilt, Lens Control, and Auto/Manual Scan
- For Standard Mode (Non-Preset) Operation

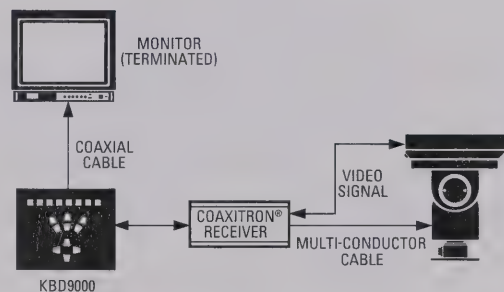


The **KBD9000** transmitter/controller is a low cost, compact, desktop keyboard designed to work with Coaxitron® fixed speed receivers. It uses the standard mode (15-bit) Coaxitron protocol for fixed speed operation. If variable speed operation or preset positioning is desired, use an extended mode (32-bit) Coaxitron control, such as the MPT9500.

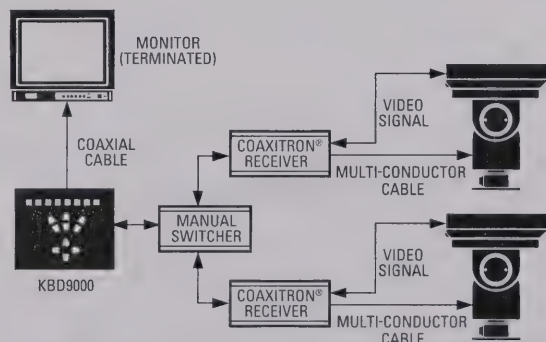
The **KBD9000's** control functions include pan/tilt, zoom, focus, iris, camera power, auto/manual scan, and auxiliary operation — all via easy-to-use keyboard commands.

The control functions operate simultaneously over the same coaxial cable as the video transmission by utilizing the vertical blanking interval, during which pulses are superimposed upon the normal video signal at a point where it is unnoticeable on the monitor. Thus, the need for additional control cables is eliminated. Coaxitron control is ideal in applications where short-to-medium distances are involved (up to 1,500 feet/457 m).

The simplest system configuration consists of the **KBD9000** transmitter/controller, coaxial cable, receiver, and camera/pan and tilt system. This basic Coaxitron system is flexible and can be expanded to control multiple camera sites with the addition of a passive switching device. In addition, multiple **KBD9000** transmitters/controllers can control multiple receivers if a more complex system is required.



BASIC CONFIGURATION



MULTIPLE CAMERA CONFIGURATION



DataFAX  
SPEC: 2551  
MANUAL: 25516

C551 / REVISED 10-00

International Organization  
for Standardization  
Registered ISO 9001



CONTROL  
COAXITRON

## MODEL

KBD9000

Desktop Coaxitron transmitter/controller with pan, tilt, and zoom lens control. 120 VAC.

## ELECTRICAL

Input Voltage

12 VAC from a 120 VAC, 60 Hz wall transformer (supplied)  
2.5 VA

Power Consumption

Electrical Connections

Input Impedance

Control Method

Two BNC connectors (video input and output)  
75 ohms or high impedance (HiZ), switchable  
15-pulse train (pulse width modulated)  
superimposed on the video signal during the  
vertical blanking interval by the KBD9000  
control transmitter. Pulse train occupies one  
TV line period.

Pulse Amplitude

Approximately 1 Vp-p added to video signal,  
333 kHz nominal

Input Video Level

1 Vp-p nominal; 2 Vp-p maximum at less than  
75% APL; 1.5 Vp-p maximum at 90% APL

System Bandwidth

Less than 2 dB down at 10 MHz (exclusive of  
cable)

## CONTROLS

Camera Power

Two push-button switches for On/Off control  
(latching function)

Aux 1, 2

Two push-button switches for latching  
functions

Aux 3, 4

Two push-button switches for momentary  
functions

Pan

Two push-button switches for Auto/Man pan  
control (latching function)

Focus

Two push-button switches for Near/Far focus  
control

Zoom

Two push-button switches for Tele/Wide  
zoom control

Iris

Two push-button switches for Open/Close iris  
control

Pan/Tilt

Four push-button switches for Pan/Tilt control

## GENERAL

Construction

Aluminum

Finish

Gray polyester powder coat

Dimensions

2.21" H x 8.10" W x 7.16" D

(5.61 cm x 20.57 cm x 18.19 cm)

Unit Weight

1.95 lb (0.90 kg)

Shipping Weight

5.0 lb (2.27 kg) approximate

## CERTIFICATIONS/RATINGS

- FCC, Class B
- Meets NEMA Type 1 standards

## RELATED PRODUCTS

ERD2200

Outdoor, fixed speed, Coaxitron receiver

IRD2024

Indoor, fixed speed, Coaxitron receiver

LRD41A11 Series

Legacy® fixed speed receiver, Coaxitron  
compatible

## OPTIONAL ACCESSORIES

EA2000

Half-duplex equalizing amplifier maintains  
control signal up to 3,000 feet (914 m) using  
RG59/U coaxial cable

Indicates change or addition.



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## MPT9000 Series Control FIXED SPEED COAXITRON®

### Product Features

- 120 VAC Input
- Extremely Flexible
- For use with 24 VAC or 120 VAC (Non-Preset) Coaxitron® Receivers
- Single Coax Cable Controls All Functions
- Up to 16 Remote Control Functions
- Single PC Board Integrates All Operational Functions
- Auto/Random Scan Capability
- Desktop or Rack Mount Models Available



MPT9000CZ TRANSMITTER/CONTROL

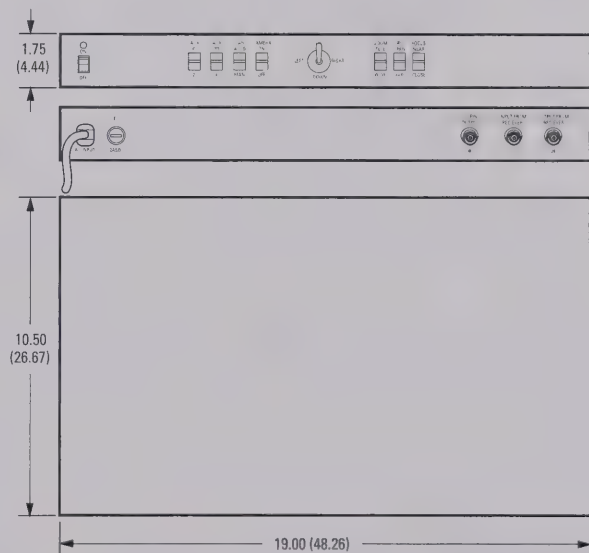
The **MPT9000 Series** offers a versatile transmitter/controller that can be used in a variety of applications for controlling pan/tilts and cameras.

The desktop or rack mount units have an eight-position joystick for operating pan/tilts, and switches for control of camera zoom, focus, and iris functions. There also are switches for auxiliary functions to control such things as lights or doors. The transmitter/controller is compatible with random interlace and 2:1 interlace cameras.

The **MPT9000 Series** is capable of auto/random scan operation when used with an appropriate receiver, such as the IRD2024 or ERD2200.

The **MPT9000 Series** uses Pelco's Coaxitron® system to send control signals to pan/tilt receivers. Coaxitron allows control signals to be sent over the video coaxial cable, eliminating the need for separate control wiring between a transmitter and receiver. The control pulses are superimposed upon the video signal during the vertical blanking interval where they are not noticeable on the monitor.

The **MPT9000 Series** can be used in short or medium distance applications when equalization of cable losses is not required. For longer distances an equalization amplifier (EA2000) can be used.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



**DataFAX**  
**SPEC: 2550**  
**MANUAL:** Not Available through DataFAX

C550 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



CONTROLS  
COAXITRON



## BASIC COAXITRON SYSTEM

In the simplest form, the Coaxitron system consists of the control/transmitter, coaxial cable, and receiver. Up to 16 separate functions (up to 10 simultaneously) are transmitted over the coaxial cable to the remotely located receiver.

These signals are then converted to drive voltages or relay switching for the appropriate accessory equipment being controlled.

The basic Coaxitron is extremely flexible in that it can be expanded to control multiple camera sites with the addition of certain switching devices such as Pelco manual switchers, non-amplified bridging sequential switchers, VS5004/VS5008 sequential switchers, and Coaxitron matrix switching systems.

## MULTIPLE CAMERA COAXITRON SYSTEM

The multiple camera Coaxitron system is an expansion of the basic Coaxitron system. In this example, a manual video switcher has been added. The selected camera signal is fed to the Coaxitron transmitter, which then feeds the monitor.

When a camera selection is made, that video line is dedicated to the transmitter, which allows the associated Coaxitron receiver to be controlled.

Functions such as auto/random scan are latching and will remain on until turned off by the transmitter.

## MULTIPLE CONTROL STATION COAXITRON SYSTEM

In the absence of an assertive control command, the transmitter is inactive. This allows several transmitters to control one receiver. If two transmitters are activated simultaneously, more than the allowable number of pulses will be detected by the receiver and the simultaneous commands will be ignored.

The video cable from the receiver is looped through the Coaxitron transmitters and is terminated at the final control station.

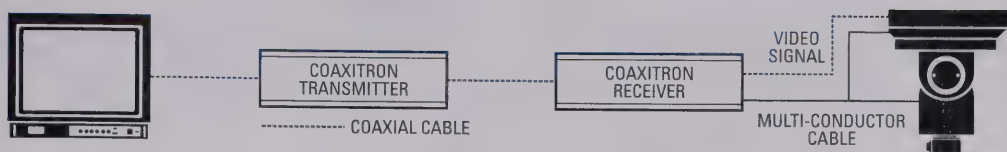
## MULTIPLE CONTROL STATIONS AND CAMERAS

This system represents the most sophisticated of the Coaxitron systems. In this particular example multiple transmitters control multiple receivers.

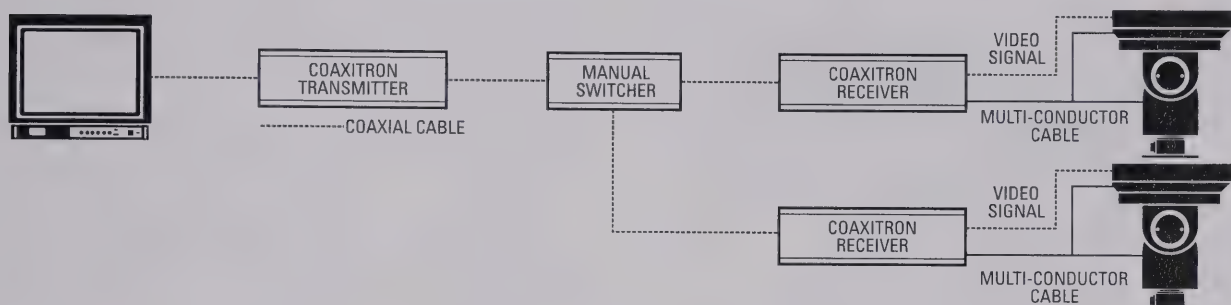
Video cables from the receivers are looped through the first control station to the second. At the first control station, a bridging, looping-type sequential switcher is used. The monitor 2 output is a hard contact switch, otherwise known as the bridged output, for continuous viewing or control selection. This monitor may also be used for sequential viewing.

In multi-control, multi-receiver systems, any one control can assume control inasmuch as there is no priority provision. If two or more control units are activated simultaneously, erroneous responses are prevented by error detection circuitry in the associated receiver. Any control may assume control of any receiver at any time.

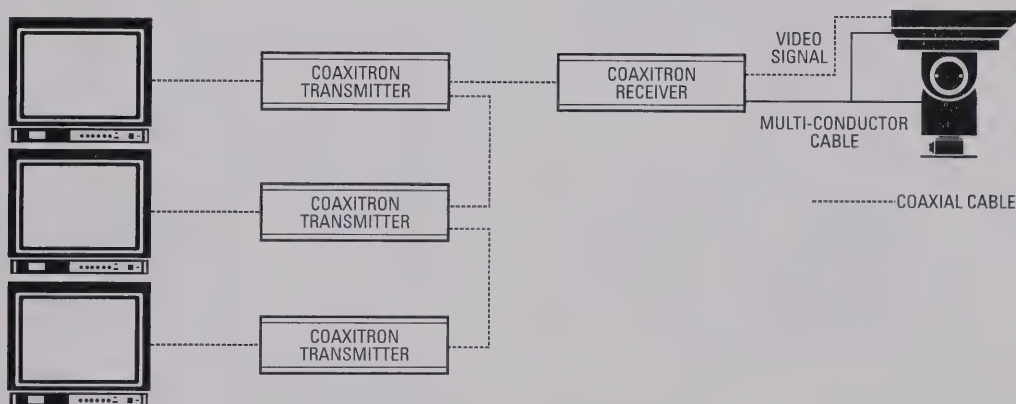
# PRODUCT SPECIFICATION



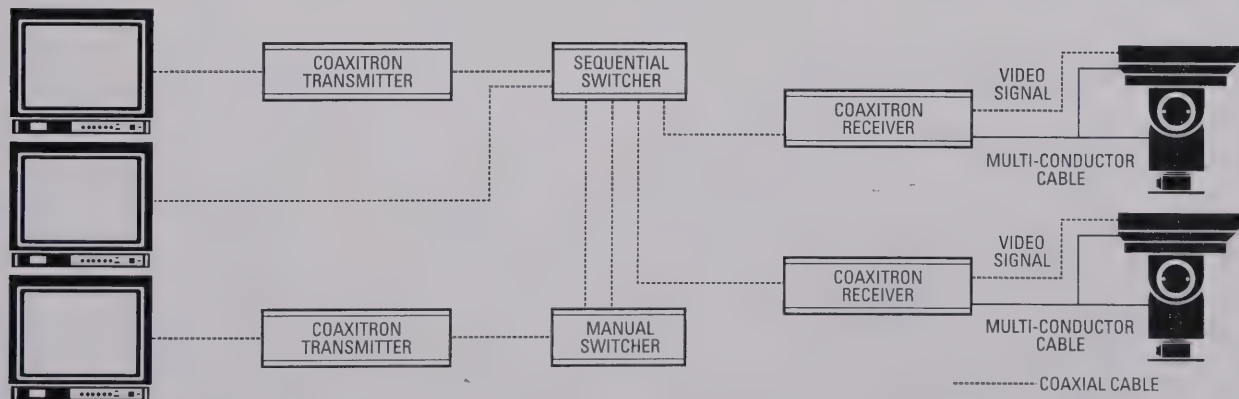
**BASIC COAXITRON SYSTEM CONFIGURATION**



**COAXITRON SYSTEM CONFIGURATION WITH MULTIPLE CAMERAS**



**COAXITRON SYSTEM CONFIGURATION WITH MULTIPLE CONTROL STATIONS**



**COAXITRON SYSTEM CONFIGURATION WITH MULTIPLE CAMERAS AND CONTROL STATIONS**

## MODELS

MPT9000CZ	Coaxitron desktop transmitter/control with pan/tilt joystick and zoom lens control capabilities. 120 VAC input
MPT9000PZ	Same as MPT9000CZ except ready to install in a standard 19-inch EIA rack or console. (1 RU)

**Note:** Four optional accessory functions (1 latching, 2 momentary; or, 4 momentary if using Aux1/Aux2 as momentary functions) are available. Please consult factory for details.

## RELATED PRODUCTS

IRD2024	Indoor, fixed speed, Coaxitron receiver.
ERD2200	Outdoor, fixed speed, Coaxitron receiver.
LRD41A11 Series	Legacy® fixed speed receiver, Coaxitron compatible.

## ELECTRICAL

Input Voltage	120 VAC, 50/60 Hz
Power Consumption	
Transmitter/Control	2.5 VA
Receiver	5 VA (120 VAC or 24 VAC)
Pan/Tilt Supply	140 VA (120 VAC) maximum 50 VA (24 VAC) maximum
Lens Supply	0-4 VA maximum
Camera Supply	15 VA (typical)
Control Method	15-pulse train (pulse width modulated) superimposed upon the video signal during the vertical interval by the control transmitter. Pulse train occupies one TV line period
Pulse Amplitude	Approximately 1 Vp-p added to video signal; 333 kHz nominal
Connectors	
Control	3 BNC connectors
Fuse Protection	3 AG type
Power Cord	3-wire grounded, 18 AWG (control and receiver)
Operating Distance	Up to:
RG59/U	750 feet (229 m)
RG6/U	1,000 feet (305 m)
RG11/U	1,500 ft (457 m)
	(75-ohm coaxial cable required)

## CONTROLS

Power On/Off	Rocker switch
Pan/Tilt	8-position joystick
Zoom	Paddle switch, TELE/WIDE
Focus	Paddle switch, NEAR/FAR
Iris	Paddle switch, OPEN/CLOSE
Pan Auto/Man	Paddle switch (latching function in receiver)
Camera On/Off	Paddle switch (latching function in receiver)
Aux 1, 2	Paddle switch (receiver provides open collector output that can be used as one latching function or two momentary functions)
Aux 3, 4	Paddle switch, two momentary functions (logic levels in receiver)
Pilot Lamp	Long life neon

## GENERAL

Environment	Indoor; 32° to 120°F (0° to 49°C)
Dimensions	
MPT9000CZ	1.75" H x 17.60" W x 10.50" L (4.44 cm x 44.70 cm x 26.67 cm)
MPT9000PZ	1.75" H x 19.00" W x 10.50" L (4.44 cm x 48.26 cm x 26.67 cm)
Unit Weight	
MPT9000CZ	7.23 lb (3.28 kg)
MPT9000PZ	7.54 lb (3.42 kg)
Shipping Weight	
MPT9000CZ	9 lb (4.07 kg)
MPT9000PZ	10 lb (4.53 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- FCC, Class B
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

LRD41TLC	Test local control module. Plug-in module for IRD2024, ERD2200, and LRD41A11 Series receivers for on-site testing.
EA2000	Half-duplex equalizing amplifier maintains control signal up to 3,000 feet (914 m) using RG59/U coaxial cable.

Indicates change or addition.



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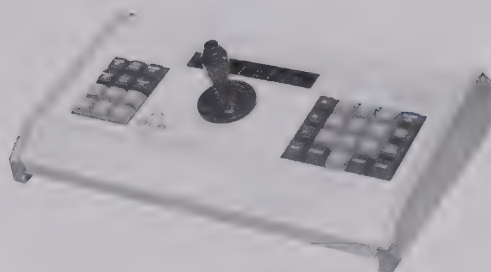


## MPT9500 Series Control

### VARIABLE SPEED COAXITRON®/RS-485, DIGITAL

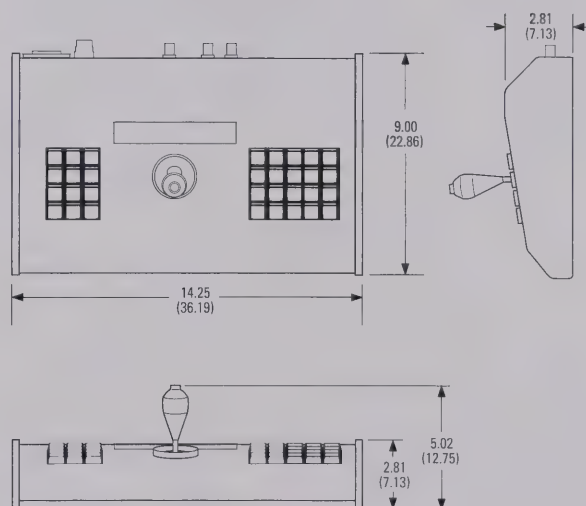
#### Product Features

- Capable of Interfacing in Both Standard or Extended Coaxitron® and RS-485 Formats
- Full PTZ Control, Including Variable Speed, for up to 32 Receivers
- Supports Presets, Patterns, and Zones
- All Programming Done Via Easy-To-Use On-Screen Programming Instructions
- 10-Character LED Display
- Programming and Control of up to Eight Auxiliary Functions
- Fully Programmable Preset Tours (MPT9500TD Only)



The **MPT9500 Series** is a microprocessor-based transmitter/controller designed to work with Coaxitron® receivers, including Legacy®, Spectra®, and Esprit® Series. The **MPT9500** interfaces CCTV equipment via standard or extended Coaxitron vertical interval signaling (15-, 16- and 32-bit protocols) and RS-485 formats. Multiple camera locations can be controlled from a single **MPT9500** in RS-485 and Coaxitron modes when used with a manual or bridging switcher. Each camera location must be manually selected for viewing.

In addition to full pan/tilt and zoom lens (PTZ) control, the **MPT9500** also has the capability to program and initiate zones, presets, and patterns and to assign labels as required. As an added feature, the **MPT9500** can operate up to eight auxiliary functions. All receiver programming is accomplished via easy-to-use keyboard commands.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



**DataFAX**  
**SPEC:** 2535  
**MANUAL:** 25356

C535 / REVISED 10-01

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MPT9500

Single station desktop transmitter/controller with PTZ functions. Interfaces with receiver via vertical interval signaling (VIS), standard or extended Coaxitron, and RS-485 formats. Provides programming and activation of presets, zones, patterns, and labels.

Additional features include activation of up to 8 auxiliary functions per receiver.

MPT9500TD

Same as MPT9500 except also includes time, date, and preset tour programming features.

(Note: A "preset tour" is defined as the sequential execution of a programmed series of up to 65 preset locations viewed one at a time on a single monitor output; the cycle repeats until interrupted.)

## RELATED PRODUCTS

CX9024RX-PP

Outdoor Coaxitron receiver with preset capability for 24 VAC pan/tilt.

CX9115RX-PP

Outdoor Coaxitron receiver with preset capability for 120 VAC pan/tilt.

CX9220RX-PP

Outdoor Coaxitron receiver with preset capability for 230 VAC pan/tilt.

ERD2200

Outdoor, fixed speed, Coaxitron receiver.

IRD2024

Indoor, fixed speed, Coaxitron receiver.

LRD41A11 Series

Legacy® fixed speed receiver, Coaxitron compatible.

LRD41C21 Series

Legacy® fixed speed receiver, Coaxitron/RS-422 compatible with up to 64 presets.

LRD41C22 Series

Legacy® variable speed receiver, Coaxitron/RS-422 compatible with up to 64 presets.

Spectra® Series

Spectra high speed dome with multi-protocol receiver.

Esprit® Series

Esprit integrated positioning system with multi-protocol receiver.

## ELECTRICAL

Input Voltage

120 VAC, 50/60 Hz

Power Consumption

12 watts

Fuse

1/4 ASB at 120 VAC

1/8 ASB at 230 VAC

Control Method

Coaxitron VIS

4-wire RS-485

Standard Baud Rates

VIS

1 MHz

RS-485

2400 baud

Command Error Rates

Duplex 0%

Simplex 2%

Input Video Level

0.5 to 1.5 Vp-p

Input Video Format

NTSC, RS-170, PAL (option)

Video Bandwidth

10 MHz

Maximum

Operating Distances

(Distances from MPT9500 to receiver)

VIS

2,000 feet (609 m) on RG11/U

RS-485\*

4,000 feet (1,219 m) on 24 AWG wire

\* Pelco recommends using shielded twisted pairs, such as Belden 9843 or similar cable, that meets or exceeds the basic requirements for EIA RS-485 applications.

## MECHANICAL

Connectors

Video

3 BNCs

Power

3-wire, 18 AWG molded

RS-485

RJ-11, 6-pin PC-mount telephone jack

## GENERAL

Ambient Operating

Temperature

0° to 120°F (-18° to 49°C)

Unit Weight

MPT9500

6.11 lb (2.77 kg)

MPT9500TD

5.96 lb (2.70 kg)

Shipping Weight

MPT9500

8 lb (3.62 kg)

MPT9500TD

8 lb (3.62 kg)

Indicates change or addition.



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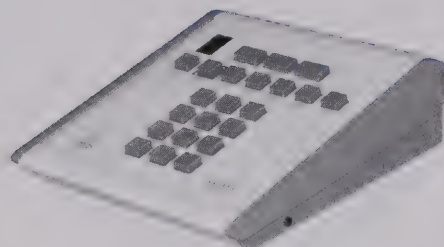


## KBD100 Keyboard

### SWITCHER CONTROL AND PROGRAMMING

#### Product Features

- Control and Program CM6700 and CM6800 Matrix Switchers
- Select Cameras and Monitors
- Operate Sequences
- Operate Auxiliaries
- Acknowledge Alarms

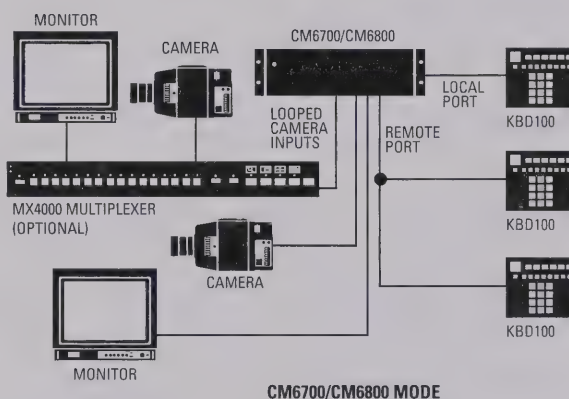


The **KBD100** keyboard is Pelco's most economical keyboard. It is used to program and operate CM6700 and CM6800 matrix switchers.

The rear of the keyboard has four DIP switches and an RJ-45 connector. The DIP switches are used to set the keyboard's address. Each keyboard in the system must have a different address. The RJ-45 connector is used to connect to either the CM6700 or the CM6800.

You can connect a single keyboard to the local keyboard port on the CM6700, or you can connect up to eight if using the remote keyboard port.

You can connect up to 16 **KBD100** keyboards to the CM6800.



DataFAX  
SPEC: 2529  
MANUAL: 25296

C529 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001





## MODEL

KBD100 Desktop keyboard, switcher only

## ELECTRICAL

Input Voltage	12 VAC or $\pm 12$ VDC
Power Consumption	5 watts
Connector Type	RJ-45, 8-pin modular (female)
Keyboard Communication Interface	RS-422
Protocol	Pelco ASCII
Baud	9600
Communication Parameters	8 data bits, odd parity, 1 stop bit

## GENERAL

Keyboard Keypad	Electromechanical
Display	Red LED, 7-segment, 2 cells
Dimensions	2.25" H x 6.00" W x 7.125" D (5.72 x 15.24 x 18.10 cm)
Unit Weight	2.11 lb (0.96 kg)
Shipping Weight	4 lb (1.82 kg)

## ENVIRONMENTAL

Operating Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing

## CERTIFICATIONS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A

## SUPPLIED ACCESSORIES

25-foot (7.6 m) RJ-45 data cable

## OPTIONAL ACCESSORIES

KBDKIT	Remote keyboard wiring kit. Required if connecting KBD100 keyboards to the Remote Keyboard Port on the CM6700/CM6800. Includes two RJ-45 wall blocks and one 120 VAC to 12 VAC transformer. Maximum cable distance for RS-422 communication over 24-gauge wire is 4,000 feet (1,219 m). Use shielded twisted pairs cable that meets basic requirements for RS-422 applications. (One wall block and transformer required for each keyboard.)
KBDKIT-X	Same as KBDKIT except includes 230 VAC to 12 VAC transformer.

Indicates change or addition.



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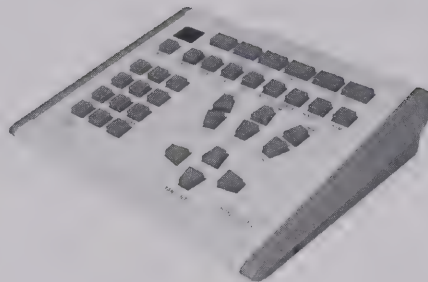
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## KBD200A Keyboard

### FULL-FUNCTIONALITY, FIXED/VARIABLE SPEED, PTZ CONTROL

#### Product Features

- Keyboard to Control:
  - CM6700/CM6800/CM9760-SAT Matrix Switchers
  - Genex® Multiplexer When Used with CM6700 and CM6800
  - Up to 16 Receivers Directly from Keyboard (such as Spectra® and Esprit®)
- Multi-Speed Control of PTZ Functions
- Preset Position and Pattern Control
- Auxiliary Operation
- Auto/Random/Frame Scanning
- Programming of CM6700/CM6800/CM9760-SAT/CM9760-MDA
- Automatic Recognition of CM6700/CM6800 and Direct Modes
- Keyboard Control of all CM6800 External Auxiliaries



The **KBD200A** Keyboard is a full-function, desktop keyboard controller that can be used in a variety of applications.

Left, right, up, and down keys provide precise pan and tilt control of fixed speed and variable speed receivers. Variable speed equipment is controlled by programming the speed with the keyboard.

Additional keys select cameras and monitors; operate presets, patterns, auxiliaries, and sequences; open and close the iris; zoom and focus the lens; and start and stop auto, frame, and random scanning.

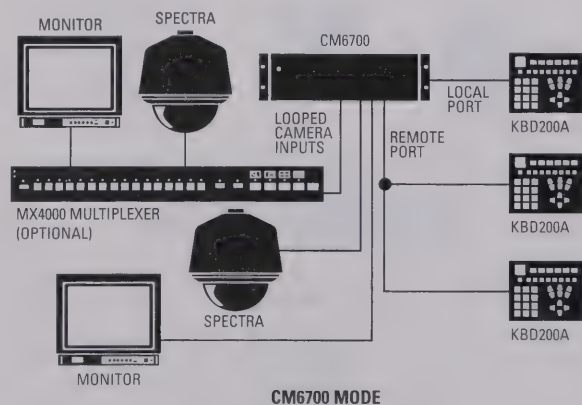
The keyboard can be used in four modes of operation: CM6700 Mode, CM6800 Mode, ASCII Mode, and Direct Mode.

In the first two modes, the keyboard is plugged into a CM6700, CM6800, or CM9760-SAT switcher/controller unit (SCU) and is used to program and operate the SCU. The maximum number of keyboards per unit is eight (CM6700 and CM6800-32X6), sixteen (CM6800-48X8, CM6800E-48X8, and CM6800-96X16), or four (CM9760-SAT). In CM6700/CM6800 applications, the keyboard can control cameras connected directly to the SCU or through an MX4000 Series Genex multiplexer.

ASCII Mode is the same as the CM6700 and CM6800 Modes except that the keyboard communicates with the SCU over dial-up or fiber-optic communication lines. An RS-232 or RS-422 interface is required for the CM6700. ASCII Mode for the CM6800 requires RS-232 or RS-485. Only one keyboard can be used with an SCU in ASCII Mode. If additional keyboards are required, they can be connected directly to the SCU and used in CM6700/CM6800 Mode.

If you do not need all the features of the CM6700/CM6800 SCU but want the same keyboard functionality, then one **KBD200A** keyboard can be wired directly to camera receivers in Direct Mode (KBDKIT required). Up to 16 receivers can be wired to a keyboard; however, a switcher such as an MS500 or VA6100, is required to route video to the monitor. Direct Mode uses two-wire control of receivers using Pelco's P protocol.

The **KBD200A** keyboard can also be used for on-screen programming of the CM9760-MDA master distribution amplifier.



DataFAX

SPEC: 2526

MANUAL: Not Available through DataFAX

C526 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

KBD200A

Desktop keyboard with full switching and programming capabilities, plus multi-speed control of PTZ functions

## ELECTRICAL

Input Voltage 12 VAC or  $\pm 12$  VDC  
Power Consumption 5 watts  
Keyboard Connector RJ-45, 8-pin, modular (female)  
Keyboard Communication

### CM6700 Mode/CM6800 Mode

Interface RS-485  
Protocol Pelco ASCII  
Baud 9600  
Communication Parameters 8 data bits, odd parity, 1 stop bit

### Direct Mode

Interface RS-422  
Protocol Pelco P  
Baud 4800  
Communication Parameters 8 data bits, no parity, 1 stop bit

### ASCII Mode

Interface  
CM6700 RS-232, RS-422  
CM6800 RS-232, RS-485  
Protocol Pelco "non-pollled" ASCII  
Baud 9600  
Communication Parameters 8 data bits, odd parity, 1 stop bit

## GENERAL

Keyboard Keypad  
Display  
Multiplexer Mode  
Indicator

Electromechanical  
Red LED, 7-segment, 2 cells  
Green LED

## ENVIRONMENTAL

Dimensions 2.25" H x 8.125" W x 7.125" D  
(5.72 x 20.64 x 18.10 cm)  
Unit Weight 2.1 lb (0.95 kg)  
Shipping Weight 4 lb (1.81 kg)  
Ambient Operating Temperature 20° to 120°F (-7° to 49°C)  
Humidity 10% to 90%, non-condensing

## CERTIFICATIONS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A

## SUPPLIED ACCESSORIES

25-foot (7.6 m) RJ-45 data cable

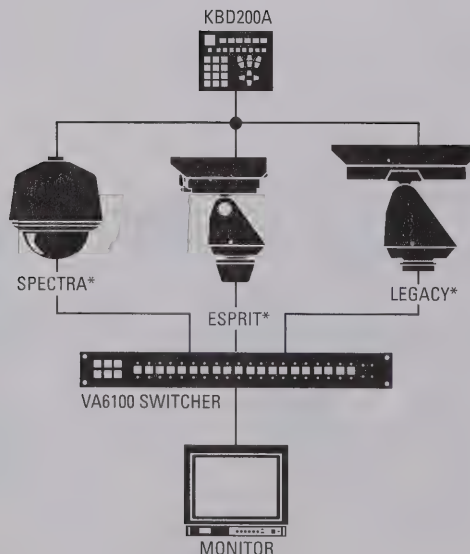
## OPTIONAL ACCESSORIES

KBDKIT

Remote keyboard wiring kit. Required if connecting KBD200A keyboards to the Remote Keyboard Port on the SCU (6700/6800 Mode) or when using a single keyboard in the Direct or ASCII Mode applications. Includes two RJ-45 wall blocks and one 120 VAC to 12 VAC transformer. Maximum cable distance for RS-422/RS-485 communication over 24-gauge wire is 4,000 feet (1,219 m). Use shielded twisted pairs cable that meets basic requirements for RS-422/RS-485 applications. (One wall block and transformer required for each keyboard.)

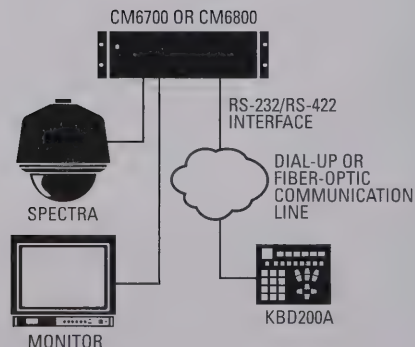
KBDKIT-X

Same as KBDKIT except includes 230 VAC to 12 VAC transformer.



\* SPECTRA AND ESPRIT HAVE BUILT-IN RECEIVERS.  
LEGACY REQUIRES LRD41C SERIES RECEIVER.

DIRECT MODE



ASCII MODE

Indicates change or addition.



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## KBD300A Keyboard

### FULL-FUNCTIONALITY, FIXED/VARIABLE SPEED, PTZ CONTROL

#### Product Features

- Keyboard to Control:
  - CM6700/CM6800/CM9760-SAT Matrix Switchers
  - Genex® Multiplexer When Used with CM6700 and CM6800
  - Up to 16 Receivers Directly from Keyboard (such as Spectra® and Esprit®)
- Automatically Recognizes Modes of Operation
- Joystick Control of PTZ Functions
- Preset Position and Pattern Control
- Auxiliary Operation
- Auto/Random/Frame Scanning
- Programming of CM6700/CM6800/CM9760-SAT/CM9760-MDA



The **KBD300A** keyboard is a full-function, desktop keyboard controller that can be used in a variety of applications.

A barrel-type joystick provides precise pan and tilt control of fixed speed and variable speed receivers. Twisting the joystick clockwise or counterclockwise zooms the lens in or out.

Keys select cameras and monitors; operate presets, patterns, auxiliaries, and sequences; open and close the iris; zoom and focus the lens; and start and stop auto, frame, and random scanning.

The keyboard can be used in three modes of operation: CM6700 Mode, CM6800 Mode, and Direct Mode. The **KBD300A** keyboard automatically recognizes the mode.

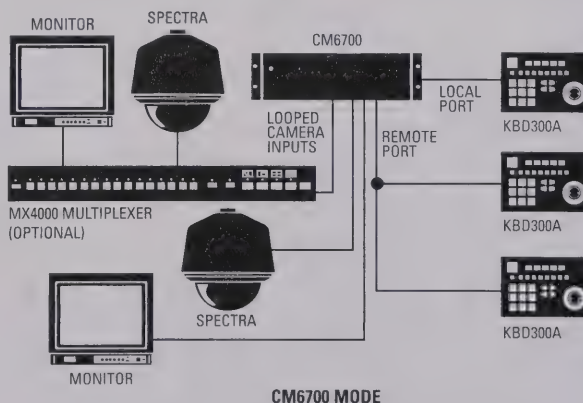
In the first two modes, the keyboard is plugged into a CM6700, CM6800, or CM9760-SAT switcher/controller unit (SCU) and is used to program and operate the SCU. The maximum number of keyboards per unit is eight (CM6700 and CM6800-32X6), sixteen (CM6800-48X8, CM6800E-48X8, and CM6800-96X16) or four (CM9760-SAT). In CM6700/CM6800 applications, the keyboard can control cameras connected directly to the SCU or through an MX4000 Series Genex multiplexer.

If you do not need all the features of the CM6700/CM6800 SCU, but want the same keyboard functionality, then one keyboard can be wired directly to camera receivers in Direct Mode (KBDKIT required).

Up to 16 receivers can be wired to a keyboard; however, a switcher such as an MS500 or VA6100, is required to route video to the monitor. Direct Mode uses two-wire control of receivers using Pelco's P or D protocol.

The **KBD300A** keyboard can also be used for on-screen programming of the CM9760-MDA master distribution amplifier.

When used with the CM9760-DMR data manager, up to four **KBD300A** keyboards can be used to control a single Pelco P or D protocol device such as a Spectra dome or Esprit positioning system.



**DataFAX**  
SPEC: 2527  
MANUAL: Not Available through DataFAX

C527 / REVISED 10-03



U.S. Patent D-464,654

International Organization  
for Standardization  
Registered ISO 9001



## MODEL

KBD300A

Desktop keyboard with full switching and programming capabilities, plus joystick control of PTZ functions

## ELECTRICAL

Input Voltage	12 VAC or $\pm 12$ VDC
Power Consumption	5 watts
Keyboard Connector	RJ-45, 8-pin, modular (female)
Keyboard Communication	

### CM6700/CM6800 Mode

Interface	RS-485
Protocol	Pelco ASCII
Baud	9600
Communication Parameters	8 data bits, odd parity, 1 stop bit

### Direct Mode

Interface	RS-422
Protocol	
Pelco P	4800 baud, 8 data bits, no parity, 1 stop bit
Pelco D	2400 baud, 8 data bits, no parity, 1 stop bit

## GENERAL

Keyboard Keypad	Electromechanical
Joystick	3-axis, vector-solving, with twisting, return-to-center head
Display	Red LED, 7-segment, 2 cells
Dimensions	2.25" H x 9.50" W x 7.125" D (5.72 x 24.13 x 18.10 cm)
Weights	
Unit	2.5 lb (1.12 kg)
Shipping	5 lb (2.26 kg)

## ENVIRONMENTAL

Ambient Operating Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing

## CERTIFICATIONS/PATENTS

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A
- U.S. Patent D-464,654

## SUPPLIED ACCESSORIES

25-foot (7.6 m) RJ-45 data cable

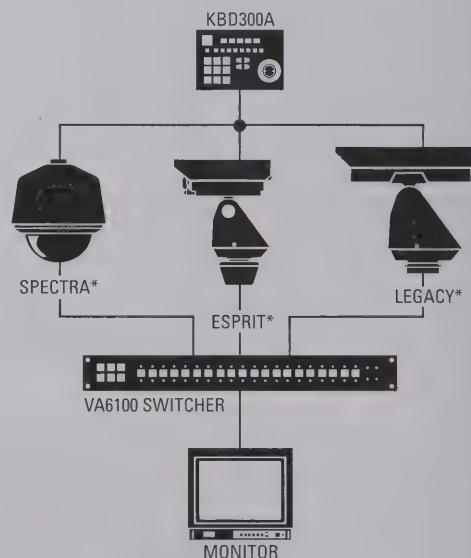
## OPTIONAL ACCESSORIES

KBDKIT

Remote keyboard wiring kit. Required if connecting KBD300A keyboards to the Remote Keyboard Port on the SCU (CM6700/CM6800 Mode) or when using a single keyboard in Direct Mode applications. Includes two RJ-45 wall blocks and one 120 VAC to 12 VAC transformer. Maximum cable distance for RS-422/RS-485 communication over 24-gauge wire is 4,000 feet (1,219 m). Use shielded twisted pairs cable that meets basic requirements for RS-422/RS-485 applications. (One wall block and transformer required for each keyboard.)

KBDKIT-X

Same as KBDKIT except includes 230 VAC to 12 VAC transformer.



\* SPECTRA AND ESPRIT HAVE BUILT-IN RECEIVERS. LEGACY REQUIRES LRD41C SERIES RECEIVER.

**DIRECT MODE**

Indicates change or addition.



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## ECONOMY SWITCHERS

### Multiple Video Sources to One or Two Monitors

#### Manual Switchers

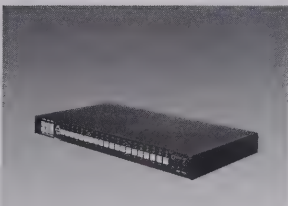
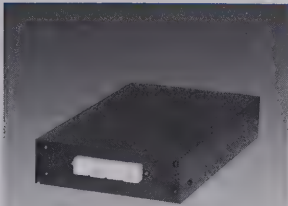
Pelco's MS500 Series manual switchers are an inexpensive and reliable way of switching 4 to 18 inputs to a single monitor output. Manual viewing selection is made with push buttons located on the front panel of the unit. The MS500 Series includes a model with two monitor outputs and the capacity to switch up to 40 inputs with a 14 push-button panel. The switchers are designed for either looping or terminating operation. Audio follow available with selected models.

#### Sequential Switchers

Pelco manufactures a diverse line of sequential switchers for low-cost, desktop applications. Sequential switchers feature vertical interval switching to eliminate frame loss and vertical roll when selecting cameras. The VS5004/VS5008 and VA6100/VA6200 Series switchers can manually or automatically switch 4, 8, 12 or 20 camera inputs to one or two monitor outputs (depending on model). Manual viewing selection is made with push buttons or toggle switches located on the front panel of the unit. Optional features include automatic sequencing and alarm inputs. Looping and terminating options are available.

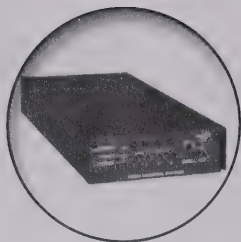
Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Economy Switcher Selection Guide





# Economy Switcher Selection Guide



VS5004

Model Series	Inputs*	Outputs	Alarms	Sequencing	Vertical Interval Switching	Camera Titles	See Page
MS500	4, 8, 12, or 18	1					409
MS540	40	2					409
VS5000	4 or 8	2	✓	✓	✓		411
VS5100	4 or 8	1		✓	✓		411
VA6100	4, 8, 12, or 20	1	✓	✓	✓	✓	413
VA6200	4, 8, 12, or 20	2	✓	✓	✓	✓	413

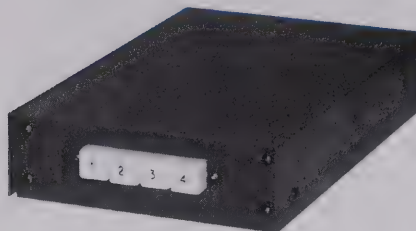
\* Dependent on model selected.  
Refer to specification sheet for model numbers.

## MS500 Series Switcher

### MANUAL, VIDEO

#### Product Features

- Economical
- 4, 8, 12, 18, or 40 Inputs
- Terminating or Looping
- Desktop or Rack Mount
- Compatible with Color or B-W Composite Video Signals
- Single Monitor Output (Except 40-Position Switcher Which Has Two Monitor Outputs)
- 120 VAC Input Models Only



MS504DT

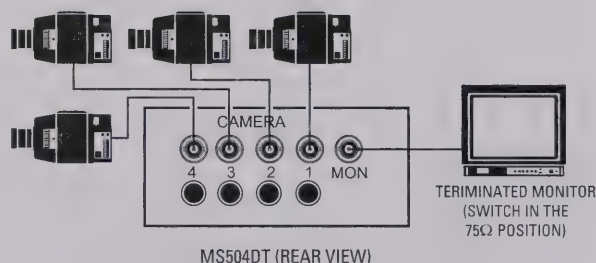
The **MS500 Series** of manual, passive switchers provide an economical means of switching 4, 8, 12, 18, or 40 inputs to a single monitor. The interlocked manual push-button switches provide 75-ohm termination at each switch.

The **MS500L Series** of manual, looping switchers provide the same functions as the MS500 manual switchers except no termination is used and connectors are provided so that the video inputs may be looped through and terminated elsewhere.

Pelco has engineered a unique method of selecting over 18 inputs. By inter-wiring two sets of switches (4-position and 10-position), you can economically and reliably switch up to 40 inputs in only 1.75 inches (4.45 cm) of panel height on most models.

All switchers are desktop models. Optional rack mounting kits are available.

Audio follow options of single (AF) or balanced (BAF) audio are available for up to 18 positions. AF switchers are equipped with SPST, normally open switch closures for each position; BAF switchers have DPDT, normally open switch closures for each position.



MS504DT (REAR VIEW)



DataFAX  
SPEC: 2820  
MANUAL: 28206

C820 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MS504DT	Manual switcher, 4 inputs, terminating
MS508DT	Manual switcher, 8 inputs, terminating
MS512DT	Manual switcher, 12 inputs, terminating
MS518DT	Manual switcher, 18 inputs, terminating
MS504GDT	Manual switcher, 4 inputs, illuminated buttons
MS508GDT	Same as MS504GDT, 8 inputs
MS512GDT	Same as MS504GDT, 12 inputs
MS518GDT	Same as MS504GDT, 18 inputs
MS504LDT	Manual switcher, 4 inputs, looping
MS508LDT	Manual switcher, 8 inputs, looping
MS512LDT	Manual switcher, 12 inputs, looping
MS518LDT	Manual switcher, 18 inputs, looping
MS540LDT	Manual switcher, 40 inputs, looping
MS504GLDT	Manual switcher, 4 inputs, illuminated buttons, looping
MS508GLDT	Same as MS504GLDT, 8 inputs
MS512GLDT	Same as MS504GLDT, 12 inputs
MS518GLDT	Same as MS504GLDT, 18 inputs
MS504AF	Manual switcher, 4 inputs, terminating with audio follow
MS508AF	Manual switcher, 8 inputs, terminating with audio follow
MS512AF	Manual switcher, 12 inputs, terminating with audio follow
MS518AF	Manual switcher, 18 inputs, terminating with audio follow
MS504AFL	Manual switcher, 4 inputs, looping, with audio follow
MS508AFL	Manual switcher, 8 inputs, looping, with audio follow
MS512AFL	Manual switcher, 12 inputs, looping, with audio follow
MS504BAF	Manual switcher, 4 inputs, terminating with balanced audio follow
MS508BAF	Manual switcher, 8 inputs, terminating with balanced audio follow
MS512BAF	Manual switcher, 12 inputs, terminating with balanced audio follow
MS504BAFL	Manual switcher, 4 inputs, looping with balanced audio follow
MS508BAFL	Manual switcher, 8 inputs, looping with balanced audio follow
MS512BAFL	Manual switcher, 12 inputs, looping with balanced audio follow

## VIDEO

Inputs	4, 8, 12, 18, or 40 as indicated by the last two digits of the model number
Video Connectors	BNC
Audio Connectors	
AF Switchers	1/8-inch RF phono jack
BAF Switchers	Terminal block
Termination	
Terminated or Non-looping	
Models	Input — 75-ohm internal termination
	Output — 75-ohm source termination
	Input — High impedance looping
	Output — High impedance looping
Looping Models	

## ELECTRICAL

(Models MS500GDT, MS500GLDT, and MS540LDT)

Input Voltage	120 VAC, 50/60 Hz
Power Requirements	0.095 amp (11 VA)
Fuse	3 AG 1/16 ASB
Power Cord	3-wire grounded, 18 AWG
(Model MS540LDT only)	
Output Amplifier	One amplified output and one non-amplified output for use with MPT9000CZ/MPT9000PZ or KBD9000
Gain	Unity
Frequency Response	Flat within $\pm 1$ dB to 10 MHz
Maximum Signal Level	2 Vp-p

## GENERAL

Switching	Interlocked manual push buttons
Construction	
Cover	Steel, black polyester powder coat
Chassis	Steel, zinc plated
Panel	Aluminum, black polyester powder coat
Environment	32° to 120°F (0° to 49°C)
Dimensions/Weight	As noted below (weights approximate)

① MS504AF, MS504DT, MS504GDT, MS504GLDT, MS504LDT	1.75" H x 5.3" W x 9.3" D (4.45 x 13.46 x 23.62 cm) Unit Weight: 3 lb (1.35 kg) Shipping Weight: 4 lb (1.81 kg)
② MS504AFL, MS504 BAF, MS504BAFL, MS508AF, MS508BAF, MS508BAFL, MS508DT, MS508GDT, MS508GLDT, MS508LDT,	1.75" H x 14.3" W x 9.3" D (4.45 x 36.32 x 23.62 cm) Unit Weight: 6 lb (2.71 kg) Shipping Weight: 8 lb (3.62 kg)
③ MS508AFL, MS512AF, MS512AFL, MS512BAF, MS512GDT, MS512GLDT, MS512LDT, MS518AF, MS518DT, MS518GDT, MS518GLDT	1.75" H x 17.12" W x 9.30" L (4.45 x 43.48 x 23.62 cm) Unit Weight: 7 lb (3.17 kg) Shipping Weight: 9 lb (4.07 kg)
④ MS540LDT	3.50" H x 17.12" W x 9.30" L (8.89 x 43.48 x 23.62 cm) Unit Weight: 9 lb (4.07 kg) Shipping Weight: 11 lb (4.98 kg)

## CERTIFICATIONS/RATINGS

- UL Listed
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

DT200	Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis. Use with ① above.
R300	Rack mount kit for up to three switchers. (Factory racking available for R300 rack kits only.) 1 RU. Use with ① above.
RKS10	Rack mount kit for single switcher. 1 RU. Use with ② above.
RKS20	Rack mount kit for single switcher. 1 RU. Use with ③ above.
RKS40	Rack mount kit for single switcher. 2 RUs. Use with ④ above.

Indicates change or addition.



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## VS5000 Series Switcher

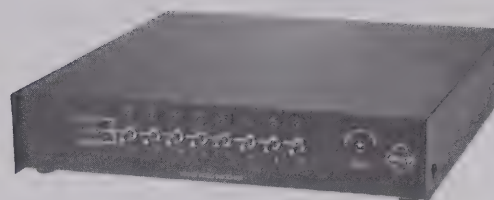
### SEQUENTIAL, VIDEO, WITH/WITHOUT ALARMS

#### Product Features

- 120 or 230 VAC Input
- 4 or 8 Inputs (Terminating or Looping)
- Single Output (VS5104/VS5108)  
Dual Outputs (VS5004/VS5008)
- Alarm Inputs (VS5004/VS5008)
- For use with Color or B-W Cameras
- Capable of Operating on 12 VDC for Use in Mobile Applications



VS5004



VS5108

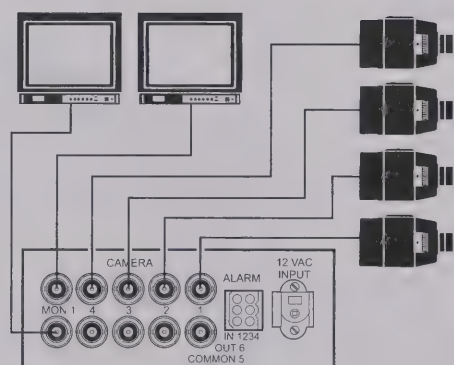
The **VS5004/VS5008** are low cost, desktop, sequential switchers designed to switch four or eight cameras manually or automatically to one or two monitors and to respond automatically to alarm inputs.

The **VS5004** is shipped as a homing unit and can be converted to a bridging unit. The **VS5008** has an added bridging amplifier that allows the **VS5008** to function as a "homing" or "bridging" unit without the need for conversion. If the MON2 output only is used, the **VS5008** functions as a "homing" unit. If both MON1 and MON2 outputs are used, it functions as a "bridging" unit.

In the alarm condition, the **VS5004/VS5008** will automatically switch and hold on the alarmed input and provide a signal to activate auxiliary equipment, such as a VCR. The alarmed condition will remain only as long as alarm closure remains. If multiple alarms occur, the **VS5004/VS5008** will switch between the alarmed inputs at a rate of approximately 5 seconds.

The **VS5104/VS5108** have the same features as the **VS5004/VS5008** except they are desktop homing switchers having one monitor output, no alarm capability, and cannot be rack mounted.

All models feature terminating inputs (which can easily be converted to looping inputs for applications requiring looping switchers), adjustable dwell (from 1-70 seconds), vertical interval switching, and bypass capability. They are powered by U.L. Listed external wall transformers (included).



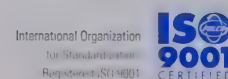
VS5004 REAR VIEW



DataFAX  
SPEC: 2808

MANUAL: 28086 (VS5004), 28096 (VS5008), 28316 (VS5104 & VS5108)

C808 / REVISED 10-00



## TECHNICAL SPECIFICATIONS

## MODELS

## Single Output, Without Alarm (Desktop Only)

VS5104	4-input, single output sequential switcher without alarm inputs, 120 VAC
VS5104/220	Same as VS5104 except 230 VAC
VS5108	8-input, single output sequential switcher without alarm inputs, 120 VAC
VS5108/220	Same as VS5108 except 230 VAC

## Dual Output, With Alarm (Desktop or Rack Mount)

VS5004	4-input, dual output sequential switcher with alarm inputs, 120 VAC
VS5004/220	Same as VS5004 except 230 VAC
VS5008	8-input, dual output sequential switcher with alarm inputs, 120 VAC
VS5008/220	Same as VS5008 except 230 VAC

## VIDEO

Inputs	Terminating; 75-ohm internal termination
Outputs	
Monitor 1/2	75-ohm source terminated (amplified)
Monitor 2	Bridging (non-amplified) unterminated (VS5004 only. Requires field conversion.)
Monitor X	Coaxitron transmitter (non-amplified) output (VS5008 only)
Gain	Unity
Dwell	Adjustable from 1–70 seconds nominal
Frequency Response	Flat within $\pm 1$ dB to 10 MHz
Maximum Signal Level	2 Vp-p
Tilt	Less than 2%
Crosstalk	Better than -40 dB at 5.5 MHz

## ELECTRICAL

Input Voltage	120 VAC, 50/60 Hz or 230 VAC, 50 Hz to dedicated wall transformer (as noted in model description)
Power Requirements for Transformer	1.5 VA (0.125 amp) at 12 volts RMS $\pm 15\%$ , 50/60 Hz from a dedicated isolated power source. (Wall transformer included.) <u>Note:</u> These units are also capable of operating on 12 VDC for use in mobile applications.
Connectors	BNC
Alarm In*	1 common and 1 wire per channel
Alarm Out*	Normally open contact, 10V at 1 mA Open collector, grounded emitter transistor (2N222)

\* Applicable to VS5004/VS5008 switchers only.

## GENERAL

Construction	
Chassis	Steel, zinc plated
Cover	Steel, black polyester powder coat
Panel	Aluminum, black polyester powder coat, white silk screen
Environment	32° to 120°F (0° to 49°C)
Dimensions	
VS5004	1.75" H x 5.63" W x 8.75" D (4.45 x 14.30 x 22.23 cm)
VS5008	1.75" H x 14.50" W x 8.50" D (4.45 x 36.83 x 21.59 cm)
VS5104	1.77" H x 5.51" W x 8.81" D (4.50 x 14.00 x 22.38 cm)
VS5108	1.77" H x 8.61" W x 9.25" D (4.50 x 21.87 x 23.50 cm)
Unit Weight	
VS5004	2.70 lb (1.23 kg)
VS5008	5.25 lb (2.38 kg)
VS5104	2.53 lb (1.15 kg)
VS5108	3.82 lb (1.73 kg)
Shipping Weight	
VS5004	4 lb (1.81 kg)
VS5008	7 lb (3.17 kg)
VS5104	4 lb (1.81 kg)
VS5108	5 lb (2.27 kg)

## CERTIFICATIONS/RATINGS

- CE, Class A (VS5004/220, VS5008/220, VS5104/220 and VS5108/220)
- UL Listed (VS5104, VS5108, VS5004, and VS5008)
- FCC, Class A (VS5104, VS5108, VS5004, and VS5008)
- Meets NEMA Type 1 standards

## OPTIONS (MODELS VS5004/VS5008 ONLY)

DT200	Dual desktop mount kit; two VS5004 switchers can be mounted side-by-side in one desktop chassis.
R300	Rack mount kit (1 RU) for up to three VS5004 switchers.
RKS10	Rack mount kit (1 RU) for one VS5008 switcher.

Note: VS5104 and VS5108 models are desktop units and cannot be rack mounted.

Indicates change or addition.



## Pelco Worldwide Headquarters:

3500 Pelco Way, Clovis, California 93612-5699 USA

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[www.pelco.com](http://www.pelco.com)

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## VA6100/VA6200 Series Switcher

### SEQUENTIAL, VIDEO, WITH ALARMS

#### Product Features

- 120 or 230 VAC Input
- 4, 8, 12, or 20 Inputs (Terminating or Looping)
- Single Output (VA6100 Series)
- Dual Outputs (VA6200 Series)
- Alarm Inputs Standard Feature
- Supports NTSC and PAL Video
- Camera ID (up to 20 characters) and External Trigger Standard on All Models



VA6220 SWITCHER

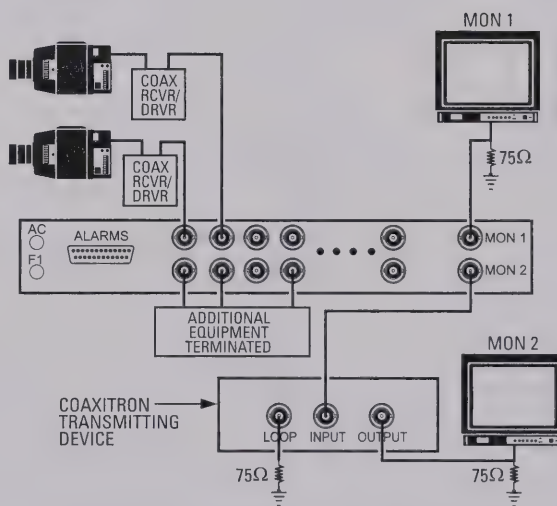
The **VA6100** and **VA6200 Series** are competitively priced sequential switchers designed to switch 4, 8, 12, or 20 cameras manually or automatically to one or two monitors.

The **VA6100 Series** switchers are single monitor output switchers without Coaxitron®-control compatibility. The **VA6200 Series** switchers are equipped with a second monitor output for Coaxitron compatibility.

The **VA6100** and **VA6200** switchers are equipped with alarm inputs. If an alarm occurs, the switcher will automatically lock and direct the input to the currently selected monitor. When an alarm is cleared, the unit will return to its previously operating dynamic state. Multiple alarms sequence at a 1 second dwell time.

All models include external trigger and camera ID as standard features. Camera dwell time can be set individually or globally for all cameras. The dwell time is adjustable from 1 to 60 seconds, in one-second increments.

In addition, all models feature terminating inputs that can be easily converted to looping inputs via jumpers on the motherboard. Monitor output for camera ID is also changeable via jumpers on the motherboard.



BRIDGING/LOOPING CONFIGURATION WITH COAXITRON CONTROL



DataFAX  
SPEC: 2840  
MANUAL: 28406 (VA6100), 28416 (VA6200)

C840 / REVISED 9-02



International Organization  
for Standardization  
Registered ISO 9001





## TECHNICAL SPECIFICATIONS

## MODELS

## Single Output

VA6104	4-input, single-output sequential switcher, 4 alarm inputs, 120 VAC
VA6104-X VA6108	Same as VS6104 except 230 VAC 8-input, single-output sequential switcher, 8 alarm inputs, 120 VAC
VA6108-X VA6112	Same as VS6108 except 230 VAC 12-input, single-output sequential switcher, 12 alarm inputs, 120 VAC
VA6112-X VA6120*	Same as VS6112 except 230 VAC 20-input, single-output sequential switcher, 20 alarm inputs, 120 VAC

## Dual Output

VA6204	4-input, dual-output, sequential switcher, 4 alarm inputs, 120 VAC
VA6204-X VA6208	Same as VA6204 except 230 VAC 8-input, dual-output, sequential switcher, 8 alarm inputs, 120 VAC
VA6208-X VA6212	Same as VA6208 except 230 VAC 12-input, dual-output, sequential switcher, 12 alarm inputs, 120 VAC
VA6212-X VA6220*	Same as VA6212 except 230 VAC 20-input, dual-output, sequential switcher, 20 alarm inputs, 120 VAC
VA6220-X*	Same as VA6220 except 230 VAC

\* These models are factory configured for use in standard 19-inch EIA rack; rack ears can be removed for desktop applications.

## VIDEO

Inputs	Terminating; 75-ohm internal termination NTSC and PAL compatible
Outputs	
Monitor 1	75-ohm source terminated
Monitor 2	75-ohm source terminated; half duplex (Coaxitron compatible). Requires field jumper change
Gain	Unity
Dwell	Camera dwell independently adjustable from 1 to 60 seconds nominal
Frequency Response	10 MHz
Maximum	
Signal Level	1.5 Vp-p
Tilt	Less than 2%
Character Generation	Available on monitor 1 or 2

## ELECTRICAL

Power Requirements	2 VA 4-position switcher 4 VA 8-position switcher 6 VA 12-position switcher 8 VA 20-position switcher 120 VAC, 50/60 Hz or 230 VAC, 50 Hz (as noted in model number) 2 common plus 1 conductor per alarm input Dry contact relay, normally open BNC
Input Voltage	
Alarm In	
Alarm Out	
Connectors	

## GENERAL

Construction	
Chassis	Steel, zinc plated
Cover	Steel, black polyester powder coat
Panel	Aluminum, with Lexan overlay
Dimensions	
VA6104, VA6204	1.75" H x 5.50" W x 8.80" D (4.45 x 13.97 x 22.35 cm)
VA6108, VA6208	1.75" H x 8.76" W x 11.25" D (4.45 x 2.25 x 28.58 cm)
VA6112, VA6212	1.75" H x 14.32" W x 8.50" D (4.45 x 36.37 x 21.59 cm)
VA6120, VA6220	1.75" H x 17.50" W x 10.00" D (4.45 x 44.45 x 25.40 cm)
Environment	32° to 120°F (0° to 49°C)
Weight	Unit Shipping
4-position switcher	3 lb (1.36 kg) 5 lb (2.26 kg)
8-position switcher	5 lb (2.26 kg) 7 lb (3.17 kg)
12-position switcher	6 lb (2.71 kg) 8 lb (3.62 kg)
20-position switcher	8 lb (3.62 kg) 10 lb (4.53 kg)

## OPTIONAL ACCESSORIES

R300	Rack mount kit (1 RU) for up to three 4-position switchers.
RMQ4	Rack mount kit (1 RU) for one or two 8-position switchers.
RKS10	Rack mount kit (1 RU) for one 12-position switcher.

## CERTIFICATIONS

- CE, Class A (VA6104-X, VA6108-X, VA6112-X, VA6120-X, VA6204-X, VA6208-X, VA6212-X, and VA6220-X)
- FCC, Class A (VA6104, VA6108, VA6112, VA6120, VA6204, VA6208, VA6212, and VA6220)



## Pelco Worldwide Headquarters:

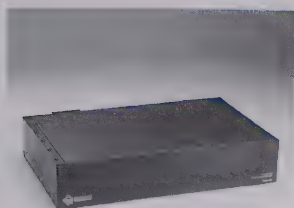
3500 Pelco Way, Clovis, California 93612-5699 USA

**USA & Canada** Tel: (800) 289-9100 • FAX (800) 289-9150 • DataFAX (800) 289-9108

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## MATRIX SWITCHERS

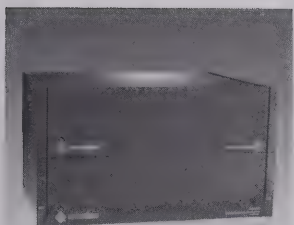
### A Complete Line of Full-Featured, Microprocessor-Based Switchers

#### CM6700 Series Matrix

The CM6700 Series is an economical, full-featured cross-point matrix switcher. The system has the capacity to switch and control **16 video inputs and 4 monitor outputs** from 1 to 8 keyboards.

#### CM6800 Series Matrix

The CM6800 Series gives you a choice of three configurations over a wide range of switch sizes: 32 x 6, 48 x 8, and 96 x 16. All of these configurations include many of the operational features of the larger switcher families in economical and easy-to-use packages. The **32 input/6 output** version is a stand-alone unit. The **48 input/8 output** version can be used as a stand-alone unit, or two units can be combined to give a powerful **96 input/16 output system**. All of these system configurations support multiple keyboards, powerful alarm functions, and relay-isolated control outputs. External packages allow expansion of alarms and control outputs. The CM6800 Series switchers can be configured with on-screen menus or with Windows®-based manager software, both in multiple languages.

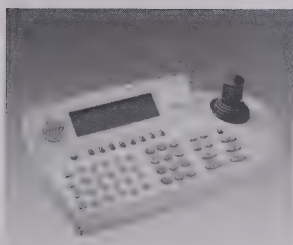


#### CM9740 Series Matrix

The CM9740 Series is a full-featured video matrix switching system for medium-sized CCTV installations. The system is designed to allow operators the ability to view and control a maximum of **256 cameras to 32 video monitors**. A single matrix bay can be configured for 256 non-looping or 128 looping video inputs and 16 monitors; a dual bay system can be configured for 256 non-looping or looping video inputs and 32 monitors.

#### CM9760 Series Matrix

The CM9760 Series is a full-featured cross-point video matrix system for medium-to-large CCTV installations. The system has the capacity to control up to **2,048 cameras and 512 monitors**. Up to 96 operators can quickly view and control cameras for general surveillance and visual verification of alarm events. The 9760 Series also features step-command macro programming for as many as 2,000 macros, each with up to 130 step commands.



Multiple 9760 Systems can be networked for expanded capacity.

#### CM9770 Series Matrix

The new CM9770 high density matrix switch takes the power and expandability of our 9760 and greatly reduces the footprint—or space required for installation. This means that you can now connect more cameras, monitors, and keyboards in less space than ever before. With control and viewing of up to **2,048 cameras and 512 monitors** on a single node, and the ability to network with other 9770, 9760 and 9740 systems, the 9770 becomes the most compatible and expandable switch in the Pelco line. A new, user-friendly Windows-based Management System provides powerful configuration tools for easy system programming, maintenance and operation.

#### VMX200 and VMX300(-E) Series Video Management Systems

The VMX200 and the new VMX300(-E) Series Video Management Systems provide alternatives to front panel buttons and complicated keyboards for the control of video systems. Both systems support single or dual monitors for viewing the easy-to-use graphical user interface. Each system uses maps of the area being observed by CCTV, with icons representing cameras showing their location in the field. Video windows are opened and the camera icons are dragged and dropped to facilitate the immediate viewing of the selected camera(s). Both systems connect to and control analog matrix switchers, processing analog video for display, and providing PTZ control via the mouse. The VMX300(-E) Series can also receive and display video from digital or IP-based video sources and offers playback of recorded video from digital video recorders. The VMX300(-E) offers a flexible client/server architecture that can be distributed across a network.

Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Matrix Switcher Selection Guide

# Matrix Switcher Selection Guide



CM9740

Model Series	Inputs	Outputs	Card Cage	PC Control	Network Expansion	Number of Keyboards	Alarm Inputs	Control Outputs	Camera Sequences	MUX Control	See Page
CM6700	16	2-4		✓		8	18	1	✓	✓	419
CM6800-32X6	32	6		✓		10	8-264	2-256	✓	✓	423
CM6800E-48X8*	48	8		✓		18	8-264	3-256	✓	✓	427
CM9740	256	32	✓	✓	✓	32	512	10,000	✓	✓	439
CM9760	2,048	512	✓	✓	✓	96	5000	20,000	✓	✓	443
CM9770	2,048	512	✓	✓	✓	96	5000	20,000	✓	✓	461

\* Can be expanded to 96 inputs and 16 outputs

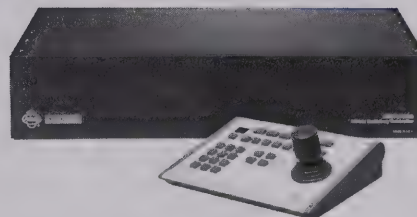


## CM6700 Series Matrix

### MICROPROCESSOR-BASED SWITCHER/CONTROLLER, 16 X 2/4

#### Product Features

- 16 Video Inputs; 2 or 4 Video Outputs
- 20-Character Camera Title
- Time (24-Hour or AM/PM Formats); Date (4 Formats)
- Alarm Display Call-up from 18 Direct-Connect Alarm Inputs
- Video Inputs Individually Selectable for Terminating or Looping
- Coaxitron® Compatible
- Individual Monitor Sequential Switching with Preset Call
- Compatible with Pelco's RS-422 D or P Protocol
- Camera Control Selection: Coaxitron® or RS-422; Individually Selectable per Camera
- Control Genex® Multiplexers
- Selectable Data Port – RS-232/RS-422/RS-485
- Password-Protected Menu Programming
- User Partitioning to Prevent Unauthorized Viewing



CM6700-MXB SWITCHER/CONTROLLER

- Compatible Keyboards:
  - Switcher Only (KBD100)
  - Switcher Plus Multi-Speed Control, Presets, Patterns, Receiver Auxiliary (KBD200A)
  - Switcher Plus 3-axis Joystick for Variable Speed PTZ Control, Presets, Patterns, Receiver Auxiliary (KBD300A)
- Optional CM6700-VMC Two-Monitor Expansion Card
- Includes Spanish-Language Menus

The **CM6700 Matrix** switcher/controller is a very affordable, highly versatile, full-featured cross-point matrix switcher. The **CM6700** provides switching and control for 16 video inputs and up to 4 monitor outputs from any one of up to 8 keyboards.

The **CM6700 Matrix** switching unit is designed to be remotely operated from desktop keyboards or external computer systems.

The versatile mounting system allows for installation in a variety of ways: either in a 19-inch rack (front or rear mount), wall, or shelf mount. In this way, the bulk of the video cables can be routed to a convenient area such as a telephone room instead of the operator location.

Straightforward on-screen menus make programming the **CM6700** simple and easy. (The **CM6700** even lets you switch to Spanish-language programming menus.) The user-enabled character display shows time and date, operation mode, camera number, and a 20-character title for quick, easy identification of the on-screen video. The display characters are white with black outline for viewing under varying lighting conditions. The display can be located anywhere on the viewing monitor and can be turned on or off.

The **CM6700** supports two system macros, or salvo sequences, to allow quick call-up of up to four cameras to four monitors – simultaneously. Salvo sequences include preset call of suitably equipped (PTZ or dome) receivers.

When an alarm is received, the **CM6700** will switch the camera for that alarm to the selected monitors. If a PTZ function is being performed when an alarm is received, an alarm-pending message will appear. An alarm will automatically call a preset and preposition a camera with suitable (PTZ or dome) receivers. Alarms are cleared either by keyboard acknowledgment or timeout after contact deactivation. Two extra alarm inputs allow for alarm-activated salvo sequence call-up. A Form C alarm relay output allows for automatic activation of an alarm event recorder or other device. In addition, this relay is manually controllable from the system keyboard.



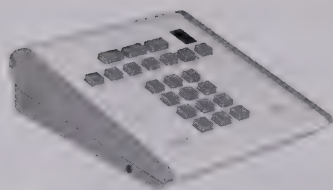
DataFAX  
SPEC: 2523  
MANUAL: Not Available through DataFAX

C523 / REVISED 10-03

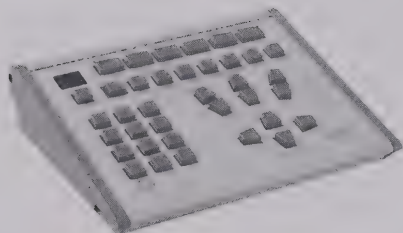


International Organization  
for Standardization  
Registered ISO 9001

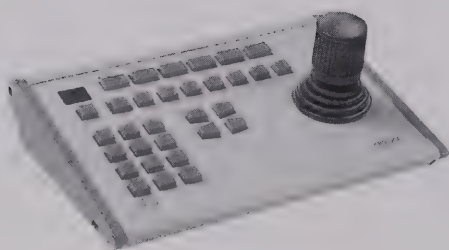




KBD100



KBD200A



KBD300A

## SYSTEM KEYBOARDS

KBD100/200A/300A Series keyboards have been engineered for use with the CM6700 matrix switcher. Each keyboard in the series offers a different level of control and functionality in order to provide maximum versatility in every application.

### KBD100

Our most economical keyboard, the KBD100 features limited CM6700 matrix control for operator locations where pan/tilt/zoom (PTZ) functions are not intended or not required. Features include programming capabilities, camera and monitor call-up, operation of sequences and patterns, and three function keys to allow local auxiliary activation.

### KBD200A AND KBD300A

#### Standard Features

These full-feature keyboards offer PTZ control, programming capabilities, camera and monitor call-up, operation of sequences and patterns, and local auxiliary activation. Added function keys allow control of receiver auxiliaries. The function keys have dual selections to allow remote control of multiplexer functions when a Pelco MX4000 Series multiplexer is used in conjunction with the CM6700 matrix switcher.

These keyboards can be configured for Direct Mode operation; see below.

#### Exclusive Keyboard Features

##### KBD200A

This economical keyboard features "Touchspeed" multi-speed control of variable speed receivers.

The KBD200A additionally features an ASCII Mode, included specifically for phone line video applications. KBD200A ASCII Mode allows complete operational control of the CM6700 matrix switcher via the ASCII port (programming not supported). When configured for ASCII Mode control, the KBD200A outputs RS-422 ASCII protocol at 9600 baud. This configuration requires the KBDKIT and, in some cases, the PV130 RS-232 to RS-422 converter.

##### KBD300A

This keyboard features a three-axis, vector-solving joystick that includes a twisting, return-to-center head for precise, single-hand control of PTZ functions.

#### Direct Mode Receiver Control

The KBD200A and KBD300A keyboards can be alternately configured for Direct Mode operation. Each keyboard requires a remote keyboard wiring kit (KBDKIT) for Direct Mode operation.

Direct Mode control is a feature that allows two-wire control of up to 16 daisy-chained receivers directly from the keyboard.

When configured for Direct Mode control, keyboards output Pelco P protocol at 4800 baud.

Direct Mode control features include programming and call-up of presets, full PTZ control of variable speed receivers, and activation of receiver auxiliaries.

The KBD300A automatically recognizes the mode (Direct or CM6700).

# TECHNICAL SPECIFICATIONS

## SWITCHER

### GENERAL

Memory Protection	Replaceable lithium battery provides data protection for ten years
Keyboard Capacity	Eight
Receiver/Dome Control	Coaxitron® and RS-422
Alarm Inputs	Eighteen, programmable (includes presets and N.O./N.C. device)
Alarm Relay Outputs	One, DPST
Rating	0.5 amp at 125 VAC
General Purpose Outputs	Two, open collector; 32 VDC max., 25 mA max.
Data Ports	Two
Receiver	RS-422, D protocol 2400 baud, P protocol 2400-9600 baud
Data (Computer)	RS-232/RS-422/RS-485, 1200-19.2K baud
Keyboard Ports	Two
Local Port	Provides data and 12 VAC power for one keyboard
Remote Port	Data only port for all additional or remote keyboards. Each keyboard connected to this port requires a KBDKIT

### ELECTRICAL

Power Source	120V or 230V, 50/60 Hz
Power Consumption	10W

### SWITCHER CHARACTERISTICS

Video Inputs	Sixteen inputs, BNC, terminating or looping (jumper selectable) 0.5 to 2.0 Vp-p composite video
Video Outputs	Two or four outputs, BNC
Switching Type	Cross-point video matrix, RS-170, NTSC, CCIR and PAL compatible
Switching Method	Vertical interval switching
Switching Time	Less than 16 milliseconds (typical)

### VIDEO

Bandwidth	17 MHz
Frequency Response	Flat to 8 MHz, ±1dB to 15 MHz
Signal-to-Noise Ratio	-55 dB (peak-to-peak vs. RMS noise)
Cross Talk	-50 dB typical at 3.58 MHz
Differential Gain	2% typical
Differential Phase	0.2° typical
Tilt	0.5% typical
Gain	Unity (±1dB)
DC Output	Zero volts
Video Cable Distances	Minimum cable requirements: <ul style="list-style-type: none"> <li>• 75 ohms impedance</li> <li>• All-copper center conductor</li> <li>• All-copper braided shield with 95% braid coverage</li> </ul>

Cable Type	Maximum Distance
RG59/U	750 ft (228 m)
RG6/U	1,000 ft (304 m)
RJ11/U	1,500 ft (457 m)

### CHARACTER GENERATION

Character Type	White with black outline
Camera Identification	One line, twenty characters plus camera number
Date/Time	One line
Programmable	On-screen, menu driven
Character Set	80 ASCII characters
Weight	<u>Unit</u> <u>Shipping</u>
CM6700-MXB2	9.46 (4.28 kg)      13 (5.88 kg)
CM6700-MXB4	10.22 (4.62 kg)     14 (6.34 kg)

### MECHANICAL

Dimensions (switcher only)	3.5" H x 17" W x 10.5" D (8.89 x 43.18 x 26.67 cm)
Mounting (switcher only)	Factory configured for EIA rack mount (2 RUs); rack ears can be removed for wall mount or freestanding applications

## KEYBOARDS

### ELECTRICAL

Input Voltage	12 VAC or ±12 VDC
Power Consumption	5 watts
Connector Type	RJ-45, 8-pin modular (female)
Communication Type	RS-485*

\* Maximum cable distance for RS-485 communication over 24-gauge wire is 4,000 feet (1,219 m). Pelco recommends using shielded twisted pairs, such as Belden 9843 or similar cable that meets or exceeds the basic requirements for EIA RS-485 applications.

### KEYBOARD COMMUNICATION

<b>6700 Mode</b>	<b>(KBD100/200A/300A)</b>
Interface	RS-485
Protocol	Pelco ASCII
Baud	9600
Communication Parameters	8 data bits, odd parity, 1 stop bit
<b>Direct Mode</b>	<b>(KBD200A/KBD300A)</b>
Interface	RS-422
Protocol	Pelco P
Baud Rate	4800
Communication Parameters	8 data bits, no parity, 1 stop bit
<b>ASCII Mode</b>	<b>(KBD200A)</b>
Interface	RS-422
Protocol	Pelco P
Baud Rate	9600
Communication Parameters	8 data bits, odd parity, 1 stop bit

### GENERAL

Keyboard Keypad	Electromechanical
Joystick (KBD300A)	3-axis, vector solving, twisting, return-to-center head
Display	
KBD100	7-segment digital display: Red LED, 1 cell
KBD200A/KBD300A	7-segment digital display: Red LED, 2 cells
	Multiplexer mode indicator: Green LED
Ambient Operating Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing

Dimensions	
KBD100	6" W x 7.125" L x 2.25" H (15.24 x 18.1 x 5.72 cm)
KBD200A	8.125" W x 7.125" L x 2.25" H (20.64 x 18.1 x 5.72 cm)
KBD300A	9.5" W x 7.125" L x 2.25" H (24.13 x 18.1 x 5.72 cm)
Weight	<u>Unit</u> <u>Shipping</u>
KBD100	1.9 lb (0.86 kg)      3 lb (1.35 kg)
KBD200A	2.1 lb (0.97 kg)      3 lb (1.35 kg)
KBD300A	2.5 lb (1.12 kg)      5 lb (2.26 kg)



## MODELS

### Matrix Bay

CM6700-MXB2	Switcher/controller. 16 inputs, 2 outputs, NTSC, 120V, 50/60 Hz
CM6700-MXB2-X	Switcher/controller. 16 inputs, 2 outputs, PAL, 230V, 50/60 Hz
CM6700-MXB4	Switcher/controller. 16 inputs, 4 outputs, NTSC, 120V, 50/60 Hz
CM6700-MXB4-X	Switcher/controller. 16 inputs, 4 outputs, PAL, 230V, 50/60 Hz

### Keyboards

KBD100*	Desktop keyboard, switcher only (25-foot cable supplied)
KBD200A*	Desktop keyboard, multi-speed PTZ, (25-foot cable supplied)
KBD300A*	Desktop keyboard, variable-speed PTZ, (25-foot cable supplied)

\* If distance between switcher and keyboard exceeds 25 feet, use KBDKIT/KBDKIT-X.

**Note:** In addition, the KBD200A and KBD300A keyboards provide control capabilities for Pelco multiplexers. The function key icons shown are active only when used in conjunction with an appropriate Pelco multiplexer.

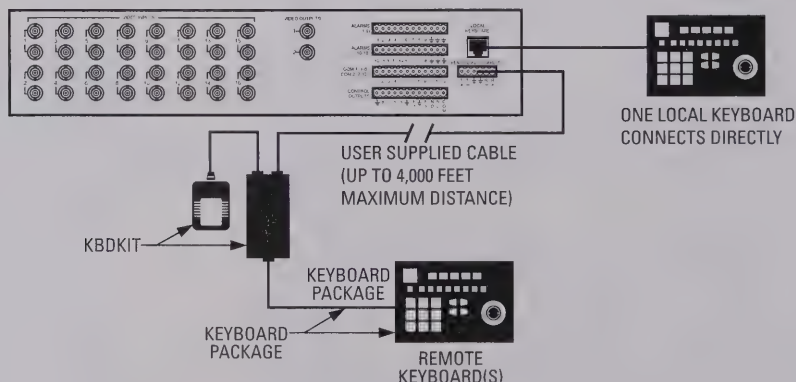
## CERTIFICATIONS/RATINGS

- CE compliant (CM6700-MXB2-X, CM6700-MXB4-X, CM6700-VMC2-X, KDB100, KDB200A, KDB300A, and KBDKIT-X)
- UL Listed (CM6700-MXB2, CM6700-MXB4, KBD100, KBD200A, and KBD300A)
- UL Listed to Canadian safety standards (CM6700-MXB2, CM6700-MXB4, KBD100, KBD200A, and KBD300A)
- FCC, Class A (CM6700-MXB2, CM6700-MXB4, CM6700-VMC2, KBD100, KBD200A, and KBD300A)
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

CM9760-CDU-T	Code distribution unit; 16-channel RS-422 transmit only (2 data wires and ground) distributor. Primarily used for configuring up to 16 pan/tilt/zoom receivers in a "star" configuration.
CM6700-VMC2	2-monitor output expansion card (NTSC). Expands a CM6700-MXB2 to a four-monitor system and features easy installation and plug-and-play functionality
CM6700-VMC2-X	2-monitor output expansion card (PAL). Use with CM6700-MXB2-X
KBDKIT	Remote keyboard wiring kit. Required if connecting KBD200A or KBD300A keyboards to the Remote Keyboard Port on the SCU (6700 Model) or when using a single keyboard in Direct or ASCII Mode applications. Includes two RJ-45 wall blocks and one 120 VAC to 12 VAC transformer. Maximum cable distance for RS-422/RS-485 communication over 24-gauge wire is 4,000 feet (1,219 m). Use shielded twisted pairs cable that meets basic requirements for RS-422/RS-485 applications. (One wall block and transformer required for each keyboard.)
KBDKIT-X	Same as KBDKIT except includes 230 VAC to 12 VAC transformer
PV130	RS-422 to RS-232 interface converter and power supply

SAMPLE CM6700 KEYBOARD WIRING DIAGRAM



Indicates change or addition.



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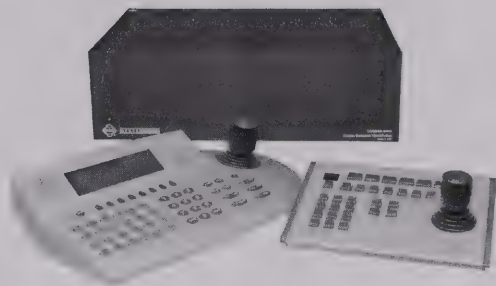


# CM6800 Matrix Switcher/Controller

## MICROPROCESSOR-BASED, CROSS-POINT VIDEO SWITCHER, 32 X 6

### Product Features

- 32 Video Inputs, 6 Video Outputs
- Inputs Allow for Viewing and Control of Cameras, Domes, PTZs, Multiplexers, and Other Devices
- Includes Multiple Language Menus and On-Screen Text
- Video Inputs Individually Selectable for Terminating or Looping with Switches on Rear Panel
- Supports Coaxitron® and RS-422 Camera Control
- Password-Protected Menu Programming
- Windows®-Based Manager Software
- System Partitioning Prevents Unauthorized Viewing and Control
- Integrated Color Bar Generator
- Wide Selection of Peripheral Components, Including Keyboards, Alarm Boxes, and Relay Boxes



- Macro Programming and Event Timers Automate System Operation
- Multiple Built-in ASCII Communication Ports
- Remote Viewing and Control Over TCP/IP Networks Using PelcoNet™

The **CM6800 Matrix** switcher/controller is a very affordable single box solution for medium-sized matrix switch applications. This fully integrated package offers a highly versatile, cross-point matrix switcher. The **CM6800** provides switching and control from any one of up to 10 keyboards. The system can also be used to control other devices, such as Genex® multiplexers.

The **CM6800** provides easy-to-use, password-protected, on-screen programming menus. Eight different languages are supported.

The **CM6800** is designed to be remotely operated from desktop keyboards or external computer systems. Programming the system is easy using on-screen menus and a system keyboard or the Windows®-based system management software. The manager software allows for remote programming and external storage of all user setups.

The user-enabled character display shows time and date, operation mode, camera number, and a 20-character title for quick, easy identification of the on-screen video.

The **CM6800** supports powerful system macros and programmable sequences, which allow activation of commonly occurring events based on time/calendar or alarms. Macros provide quick call-up of multiple cameras to multiple monitors.

Macros may also activate preset positions and auxiliaries on suitably equipped (PTZ or dome) receivers; and activate external relays to turn on lights, lock doors, or control other auxiliary functions (additional equipment may be required).

Built-in video loss detection alerts operators or technicians of camera failure. Logical camera numbering provides the ability to assign any camera number to the physical input. An integral color bar generator allows the user to adjust monitor settings.

With the **CM6800** the system manager can select from a wide variety of alarm handling and display options. An alarm can trigger a macro, preset, or pattern, and alarmed cameras can be displayed on one or several monitors. There are also choices for the order in which alarms are displayed, alarm priorities, automatic or manual acknowledgement, and activation of auxiliaries.

Multiple ports are provided for PTZ control and keyboards. A single data line, using Pelco's M protocol, can accommodate various types of equipment, such as keyboards and external alarm interface units. RS-232 ports allow for communication with a PC. Peripheral components allow for expansion of alarms, relay contacts, and keyboards.



DataFAX

SPEC: 21522

MANUAL: Not Available through DataFAX

C1522 / NEW 10-02



International Organization  
for Standardization;  
Registered ISO 9001





## MATRIX SWITCHER

The CM6800 matrix switcher/controller provides switching and control for up to thirty-two video inputs and six monitor outputs from any one of up to ten keyboards, PCs and other devices. The CM6800 can be controlled from a local or remote keyboard, or from an external computer. Additionally, it can be used with Genex multiplexers to display multiple camera views on a monitor. The CM6800 features menu-driven, password-protected programming either directly from the switcher or with the CM6800-MGR software package installed on a personal computer. Programming menus and onscreen text are provided in eight languages – English, French, German, Italian, Polish, Portuguese, Russian, and Spanish. Multiple ports are provided for PTZ control, keyboards, and peripheral components.

### MODELS

CM6800-32X6	Switcher/controller, 32 video inputs, 6 video outputs, NTSC
CM6800-32X6-X	Switcher/controller, 32 video inputs, 6 video outputs, PAL

### GENERAL

Memory Protection	Lithium battery provides 2 weeks of data protection.
Keyboards	
Total Capacity	Ten: eight KBD100/200A/300A Series keyboards and two KBD960 Series keyboards
Keyboard Power	CM6800-32X6 can provide power for one KBD100/200A/300A Series keyboard. Additional keyboards require a remote power supply.
Receiver/Dome Control	Coaxitron® and RS-422
Alarm Inputs	Eight individually programmable for N.O. or N.C. on rear panel (plus an additional 128, via ALM2064, Alarm Interface Units, providing a total of 136 possible)
Control Outputs on Rear Panel	
Relay (SPDT)	One, rated at 0.5 amp at 125V, 1 amp at 30 VDC, 60 milliohms contact resistance
Open collector (TTL)	One; 15 VDC maximum, 25 mA maximum

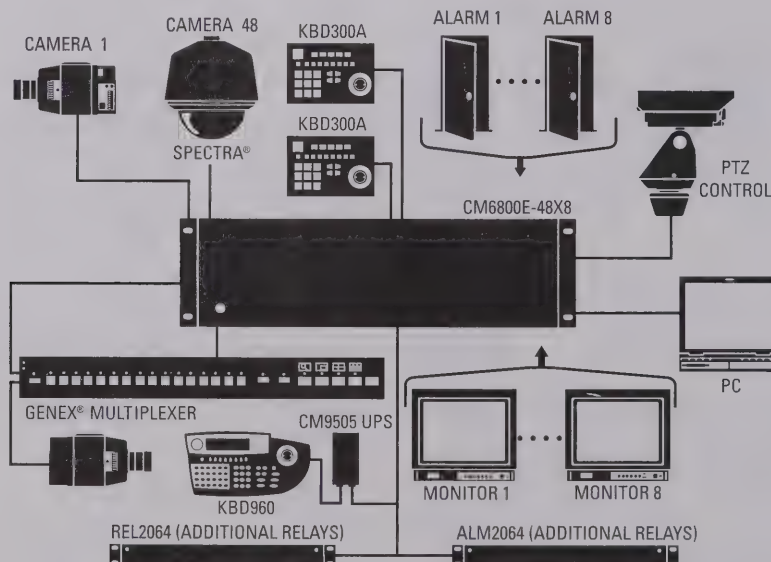
Additional Outputs	Two REL2064, Relay Interface Units, may be connected to expand relay outputs to a maximum of 128
Communication Ports	Six total: five data ports, one PTZ control port, flexible configuration options; 1 data port powered for keyboards
Ambient Operating Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing

### ELECTRICAL

Power Source	120V or 230V, 50/60Hz, auto-ranging
Power Consumption	25 watts

### SWITCHER CHARACTERISTICS

Video Inputs	Thirty-two, BNC, terminating or looping (individually selectable per camera) .5 to 2 Vp-p composite video, video loss detection
Video Outputs	Six outputs, BNC
Switching Type	Cross-point video matrix. NTSC and PAL compatible
Switching Method	Vertical interval switching
Switching Time	Less than 16 milliseconds (typical)



SAMPLE CM6800-32X6 SYSTEM



# TECHNICAL SPECIFICATIONS

## VIDEO

Bandwidth	15 MHz
Frequency Response	Flat to 8 MHz, $\pm 1$ dB to 13 MHz
Signal-to-Noise Ratio	-50 dB (peak-to-peak vs. RMS noise)
Adjacent Channel Crosstalk	-55 dB typical at 3.58 MHz
Differential Gain	0.03% typical
Differential Phase	0.24° typical
Gain	Unity ( $\pm 1$ dB)
DC Output	Zero volts
Video Cable Distances	Minimum cable requirements: <ul style="list-style-type: none"> <li>• 75 ohms impedance</li> <li>• All-copper center conductor</li> <li>• All-copper braided shield with 95% braid coverage</li> </ul>

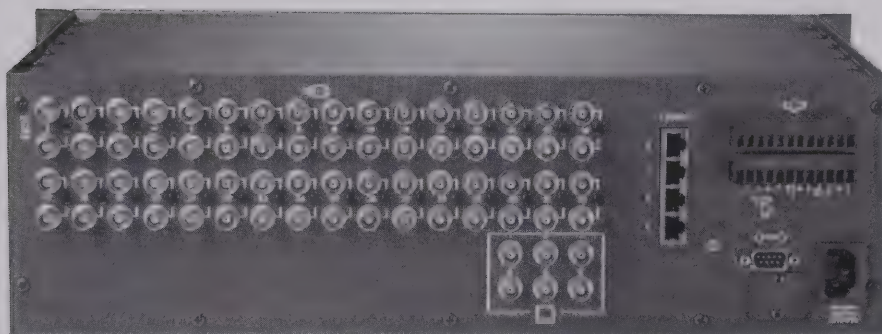
Cable Type	Maximum Distance
RG59/U	750 ft (228 m)
RG6/U	1,000 ft (304 m)
RJ11/U	1,500 ft (457 m)

## CHARACTER GENERATION

Character Type	White with black outline, adjustable brightness
Camera Identification	Two lines, twenty character title, plus camera number, monitor number, date (4 formats) and time (24-hour or AM/PM formats); each item user-selectable
Programmable Character Set	On-screen, menu driven 128 ASCII characters

## MECHANICAL

Dimensions (switcher only)	5.25" H x 17.4" W x 12.25" D (13.34 x 44.20 x 31.12 cm)
Mounting (switcher only)	Factory configured for EIA rack mount (3 RU); rack ears can be removed for versatile wall mount or freestanding applications
Weight (switcher only)	
Unit	11.6 lb (5.22 kg)
Shipping	18 lb (8.1 kg)



CM6800-32X6 REAR PANEL



Video Inputs, 1-32, terminating or looping (individually selectable per camera)



Video Outputs (Monitor), 1-6



RJ-45 Data Ports, COM 2-5 (Used to connect keyboards, Genex, and other peripheral devices, such as alarm interface units)



COM 1 Data Port (DB-9 connection; used to connect a PC or ASCII device)



Alarm Inputs, 1-8 (N.C. or N.O.; in addition, up to four ALM2064 units can be connected using a data port)



PTZ Control Port, PTZ-A (RS-422 output can control video sources using D or P protocol; up to four CM9760-CDU-T units can be connected for additional receiver capacity)



Auxiliary Control Output (One relay output, one open collector output; in addition, up to two REL2064 units can be connected using a data port)

## MODELS

### Matrix Switcher

CM6800-32X6

Switcher/controller, 32 video inputs, 6 video outputs, NTSC, 120/230V, 50/60 Hz

CM6800-32X6-X

Switcher/controller, 32 video inputs, 6 video outputs, PAL, 120/230V, 50/60 Hz

### Keyboards

KBD960

Full-function desktop system variable-speed keyboard with 24 programmable soft keys. 120V, 60 Hz

KBD960-X

Same as KBD960 except 230V, 50 Hz

KBR960

Full-function 19-inch EIA rack mount keyboard (4 RUs), 120V, 60 Hz

KBR960-X

Same as KBR960 except 230V, 50 Hz

KBD300A\*

Desktop system keyboard with full switching and programming capabilities, plus joystick control of PTZ functions.

KBD200A\*

Desktop keyboard, multi-speed PTZ

KBD100\*

Desktop keyboard, no PTZ

\* 25-foot cable supplied. If distance between switcher and keyboard exceeds 25 feet or if using more keyboards than the switcher can power, use KBDKIT/KBDKIT-X (CM6800-32X6 can provide power for one KBD100/200A/300A Series keyboard). KBDKIT/KBDKIT-X required when wiring more than one keyboard to a single keyboard port.

### Interface Units

ALM2064

Alarm interface unit; provides alarm monitoring capabilities for up to 64 alarm inputs. 100-240V, 50/60 Hz, auto-ranging. (1 RU)

REL2064

Relay interface unit; provides 64 relays for operating peripheral equipment. 100-240V, 50/60 Hz, auto-ranging. (1 RU)

**Note:** Cannot be controlled from KBD100.

## OPTIONAL ACCESSORIES

CM9760-CDU-T

Code distribution unit; 16-channel RS-422 transmit only (2 data wires and ground) distributor. Primarily used for configuring up to 16 pan/tilt/zoom receivers in a "star" configuration.

KBDKIT

Remote keyboard wiring kit; includes two RJ-45 wall blocks and one 120V to 12V transformer. Use when distance between switcher and keyboard exceeds 25 feet or if using more keyboards than the switcher can power (CM6800-32X6 can provide power for one KBD100/200A/300A Series keyboard).

Required when wiring more than one keyboard to a single keyboard port.

KBDKIT-X

Same as KBDKIT except includes 230V to 12V transformer

PV130

Converter kit, RS-232/RS-422, with 12 VDC power supply.

PelcoNet™

Transmission system for PTZ functions, camera control, and remote site viewing.

VMX200 Series

Video management system; graphical map/icon-based user interface for mouse-driven operator control from external PC.

## CERTIFICATIONS/RATINGS

- CE, Class B (CM6800-32X6-X, KBD960-X and KBR960-X)
- UL Listed (CM6800-32X6)
- UL Listed to Canadian safety standards (CM6800-32X6)
- FCC, Class B (CM6800-32X6)



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# CM6800E Matrix Switcher/Controller

MICROPROCESSOR-BASED, CROSS-POINT VIDEO SWITCHER, 48 X 8, EXPANDABLE

## Product Features

- 48 Video Inputs, 8 Video Outputs; Can Be Expanded to 96 x 16
- Inputs Allow for Viewing and Control of Cameras, Domes, PTZs, Multiplexers, and Other Devices
- Includes Multiple Language Menus and On-Screen Text
- Video Inputs 1-40 Individually Selectable for Terminating or Looping with Switches on Rear Panel
- Supports Coaxitron® and RS-422 Camera Control
- Password Protected Menu Programming
- Windows®-Based Manager Software
- System Partitioning Prevents Unauthorized Viewing and Control
- Wide Selection of Peripheral Components, Including Keyboards, Alarm Boxes, and Relay Boxes

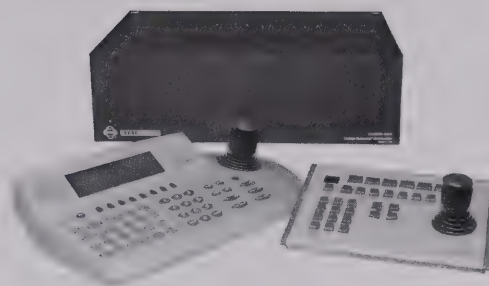
The **CM6800E** Matrix switcher/controller is a very affordable solution for medium-sized matrix switch applications. This fully integrated and highly versatile cross-point matrix switcher provides switching and control from any one of up to 18 keyboards. This switcher can also be used to control other devices, such as Genex® multiplexers. The **CM6800E** provides easy to use, password-protected, on-screen programming menus. Eight languages are supported.

The **CM6800E-48X8** can be used in the following configurations:

- A single unit provides 48 inputs and eight outputs.
- Two **CM6800E-48X8** units can be combined, providing switching and control of up to 96 inputs and 16 outputs.
- The **CM6800E-48X8** can function as a remote satellite switcher in a CM9740/CM9760 system, allowing the system to handle additional video, alarm, and relay inputs, as well as allowing for use of M protocol devices, such as external alarm and relay units.

The **CM6800E** is designed to be remotely operated from desktop keyboards or external computer systems. Programming the system is easy using on-screen menus and a system keyboard or a Windows®-based system management software. The manager software allows for remote programming and external storage of all user setups.

The user-enabled character display shows time and date, operation mode, camera number, and a 20-character title for quick, easy identification of the on-screen video.



- Macro Programming and Event Timers Automate System Operation
- Multiple Built-in ASCII Communication Ports
- Remote Viewing and Control Over TCP/IP Networks Using PelcoNet™

The **CM6800E** supports powerful system macros and programmable sequences, which allow activation of commonly occurring events based on time/calendar or alarms. Macros provide quick call-up of multiple cameras to multiple monitors. Macros may also activate preset positions and auxiliaries on suitably equipped (PTZ or dome) receivers; and activate external relays to turn on lights, lock doors, or control other auxiliary functions (additional equipment may be required).

Built-in video loss detection alerts operators or technicians. Logical camera numbering provides the ability to assign any camera number to the physical input. An integral color bar generator allows the user to adjust monitor settings.

With the **CM6800E** the system manager can select from a wide variety of alarm handling and display options. An alarm can trigger a macro, preset, or pattern, and alarmed cameras can be displayed on one or several monitors. There are also choices for the order in which alarms are displayed, alarm priorities, automatic or manual acknowledgement, and activation of auxiliaries.

Multiple ports are provided for PTZ control and keyboards. A single data line, using Pelco's M protocol, can accommodate various types of equipment, such as keyboards and external alarm interface units. RS-232 ports allow for communication with a PC. Peripheral components allow for expansion of alarms, relay contacts, and keyboards.



DataFAX  
SPEC: 21528  
MANUAL: Not Available through DataFAX

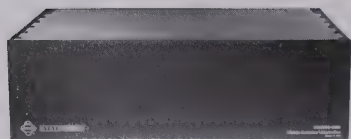
C1528 / REVISED 6-03



International Organization  
for Standardization  
Registered ISO 9001







## MATRIX SWITCHER

The CM6800E matrix switcher/controller provides switching and control for up to 48 video inputs and eight monitor outputs from any one of up to 18 keyboards, PCs and other devices. Two CM6800E-48X8 units can be combined, providing switching and control of up to 96 inputs and 16 outputs. The CM6800 can be controlled from a local or remote keyboard, or from an external computer. Additionally, it can be used with Genex multiplexers to display multiple camera views on a monitor, or as a satellite device in a CM9740/CM9760 System. The CM6800 features menu-driven, password-protected programming either from the switcher or with the CM6800-MGR software package installed on a PC. Programming menus and onscreen text are provided in eight languages — English, French, German, Italian, Polish, Portuguese, Russian, and Spanish. Multiple ports are provided for PTZ control, keyboards, and peripheral components.

### MODELS

CM6800E-48X8	Switcher/controller, 48 video inputs, 8 video outputs, NTSC
CM6800E-48X8-X	Switcher/controller, 48 video inputs, 8 video outputs, PAL
CM6800-96X16	Expanded switcher/controller system; contains two CM6800E-48X8 units and one CM6800E-KIT. 96 video inputs, 16 video outputs, NTSC
CM6800-96X16-X	Expanded switcher/controller system; contains two CM6800E-48X8-X units and one CM6800E-KIT. 96 video inputs, 16 video outputs, PAL
CM6800E-KIT	Expansion kit containing cables and instructions needed to connect two CM6800E-48X8 units together to create a 96 x 16 system

### GENERAL

Memory Protection	Lithium battery provides 2 weeks of data protection.
Keyboards	
CM6800E-48X8	Eighteen: sixteen KBD100/200A/300A Series keyboards and two KBD960 Series keyboards
Keyboard Power	Powers two KBD100/KBD200A/KBD300A Series keyboards. Additional keyboards require a remote power supply.
Receiver/Dome Control	Coaxitron® and RS-422
Alarm Inputs	
CM6800E-48X8	Eight individually programmable for N.O. or N.C. on rear panel
96 x 16 System	16 total: eight on each CM6800E-48X8 unit
External	Up to four ALM2064, Alarm Interface Units can be connected to the CM6800E-48X8 (main unit only in a 96 x 16 system)
Control Outputs on Rear Panel	
Relay (SPDT)	
CM6800E-48X8	Two; rated at 0.5 amp at 125V, 1 amp at 30 VDC, 60 milliohms contact resistance
96 x 16 System	Four total: two on each CM6800E-48X8 unit
Open collector (TTL)	
CM6800E-48X8	One; 15 VDC maximum, 25 mA maximum
96 x 16 System	Two total: one on each CM6800E-48X8 unit
Additional Outputs	Up to four REL2064, Relay Interface Units, may be connected to the CM6800E-48X8 (main unit only in a 96 x 16 System)

### Communication Ports

CM6800E-48X8	Ten total: eight data ports, two PTZ control ports; 2 data ports powered for keyboards
96 x 16 System	12 total: eight data ports (main unit only), four PTZ control ports (two on each unit); 2 data ports powered for keyboards (main unit only).

**Note:** In a 96 x 16 System, all system accessories such as keyboards and alarm interface units, are connected to the communication ports on the main CM6800E unit. PTZ devices can be connected to the communication ports on either unit.

### Ambient Operating

Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing
Dimensions (switcher only)	5.25" H x 17.4" W x 12.25" D (13.34 x 44.20 x 31.12 cm)
Mounting (switcher only)	Factory configured for EIA rack mount (3 RUs); rack ears can be removed for versatile wall mount or freestanding applications (48X8 switcher only)
Weight	
Unit	11.6 lb (5.22 kg)
Shipping	18 lb (8.1 kg)

### ELECTRICAL

Power Source	120V or 230V, 50/60Hz, auto-ranging
Power Consumption	
CM6800E-48X8	25 watts
96 x 16 System	50 watts

### SWITCHER CHARACTERISTICS

Video Inputs	BNC, terminating or looping (individually selectable per camera) 0.5 to 2 Vp-p composite video, video loss detection
CM6800E-48X8	Forty
96 x 16 System	Eighty
Alternate Video Inputs	BNC, terminating 0.5 to 2 Vp-p composite video, video loss detection
CM6800E-48X8	Eight
96 x 16 System	Sixteen
Video Outputs	BNC
CM6800E-48X8	Eight
96 x 16	Sixteen
Switching Type	Cross-point video matrix. NTSC and PAL compatible
Switching Method	Vertical interval switching
Switching Time	Less than 16 milliseconds (typical)

# SYSTEM COMPONENTS/TECHNICAL SPECIFICATIONS

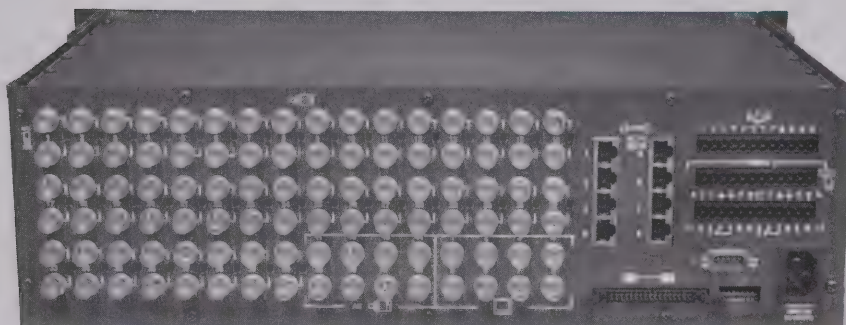
## VIDEO

Bandwidth	15 MHz
Frequency Response	Flat to 8 MHz, $\pm 1$ dB to 13 MHz
Signal-to-Noise Ratio	-50 dB (peak-to-peak vs. RMS noise)
Adjacent Channel Crosstalk	-55 dB typical at 3.58 MHz
Differential Gain	0.03% typical
Differential Phase	0.24° typical
Gain	Unity ( $\pm 1$ dB)
DC Output	Zero volts
Video Cable Distances	Minimum cable requirements: <ul style="list-style-type: none"> <li>75 ohms impedance</li> <li>All-copper center conductor</li> <li>All-copper braided shield with 95% braid coverage</li> </ul>

Cable Type	Maximum Distance
RG59/U	750 ft (228 m)
RG6/U	1,000 ft (304 m)
RJ11/U1	1,500 ft (457 m)

## CHARACTER GENERATION

Character Type	White with black outline, adjustable brightness
Camera Identification	Two lines, twenty character title, plus camera number, monitor number, date (4 formats) and time (24-hour or AM/PM formats); each item user-selectable
Programmable	On-screen, menu driven



CM6800E-48X8 REAR PANEL



Video Inputs, 1-40, terminating or looping (individually selectable per camera)

ALT



Alternate Video Inputs, 41-48, terminating



Video Outputs (Monitor), 1-8



RJ-45 Data Ports, COM 1-8 (Used to connect keyboards, Genex, and other peripheral devices such as alarm interface units)



Bay-to-Bay Video Port (Used to connect the two CM6800E-48X8 units in a 96 x 16 system)



Primary COM 1 Data Port (DB-9 connection; used to connect a PC or ASCII device)



Alarm Inputs, 1-8 (N.C. or N.O.; in addition, up to four ALM2064 units can be connected using a data port)

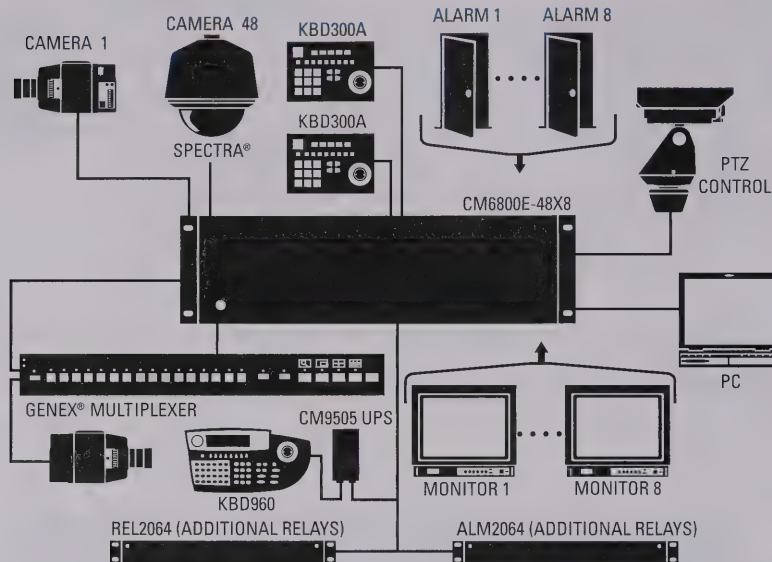


PTZ Control Ports, PTZ-A and PTZ-B (Two RS-422 outputs can control video sources using D or P protocol; up to four CM9760-CDU-T units can be connected to each port for additional receiver capacity)



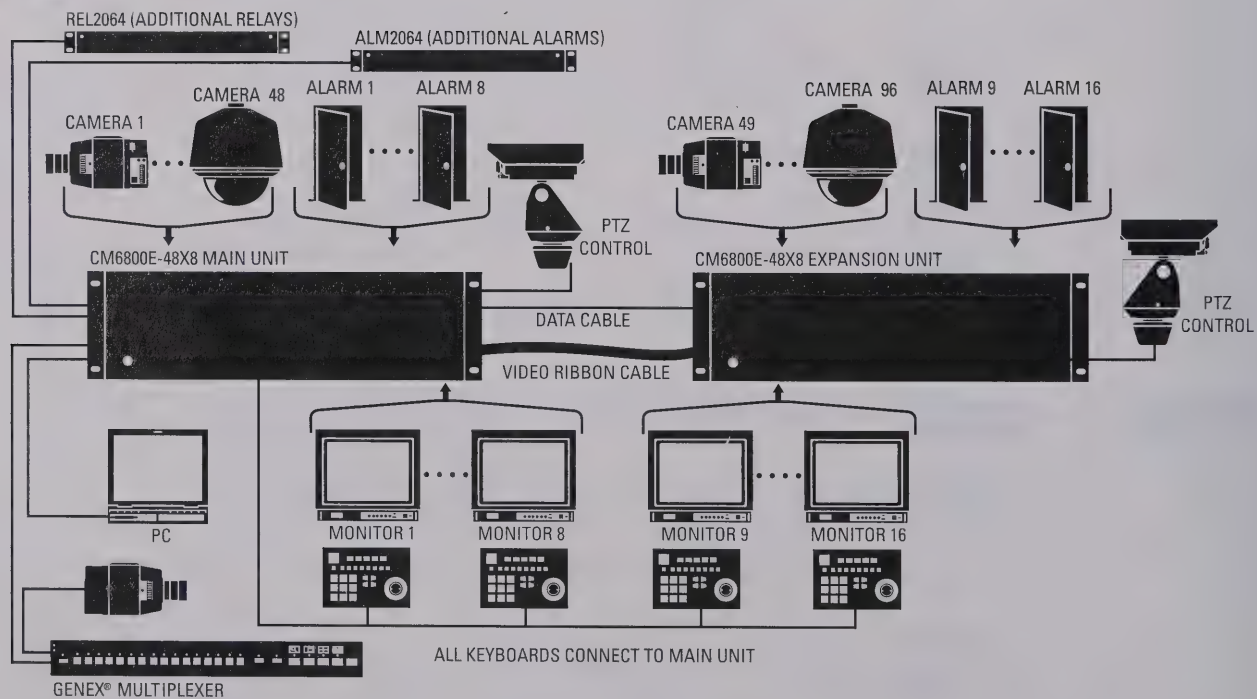
Auxiliary Control Outputs, 1-2 and F3 (Two relay outputs, one open collector output; in addition, up to four REL2064 units can be connected using a data port)

1



SAMPLE CM6800E-48X8 SYSTEM

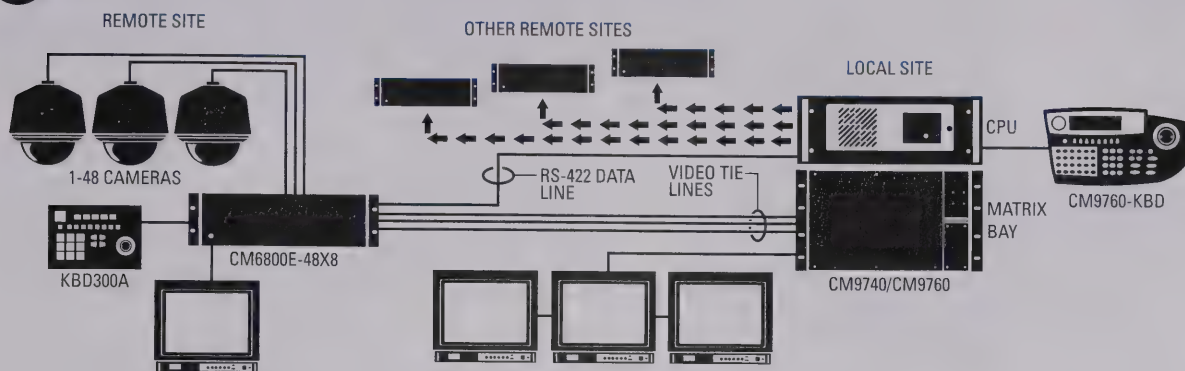
2



SAMPLE CM6800E-96X16 SYSTEM



3



**SAMPLE CM9760 SYSTEM WITH CM6800E-48X8 AS A SATELLITE SWITCHER**

The CM6800E-48X8 can be used in the following configurations:

- 1 A single unit provides up to 48 inputs and eight outputs.
- 2 Two CM6800E-48X8 units can be combined into a "bay-to-bay" 96 x 16 system, providing switching and control of up to 96 inputs and 16 outputs from the main unit.
- 3 The CM6800E-48X8 can function as a remote satellite switcher in a CM9740/CM9760 system, allowing the system to handle additional video, alarm, and relay inputs, as well as allowing for use of M protocol devices, such as external alarm and relay units.

## MODELS

### Matrix Switcher

CM6800E-48X8

Switcher/controller, 48 video inputs, 8 video outputs, NTSC, 120/230V, 50/60 Hz

CM6800E-48X8-X

Switcher/controller, 48 video inputs, 8 video outputs, PAL, 120/230V, 50/60 Hz

CM6800-96X16

Expanded switcher/controller system; contains two CM6800E-48X8 units and one CM6800E-KIT. 96 video inputs, 16 video outputs, NTSC, 120/230V, 50/60 Hz

CM6800-96X16-X

Expanded switcher/controller system; contains two CM6800E-48X8-X units and one CM6800E-KIT. 96 video inputs, 16 video outputs, PAL, 120/230V, 50/60 Hz

CM6800E-KIT

Expansion Kit containing cables and instructions needed to connect two CM6800E-48X8 units together to create a 96 x 16 System

### Keyboards

KBD960

Full-function desktop system variable-speed keyboard with 24 programmable soft keys. 120V, 60 Hz

KBD960-X

Same as KBD960 except 230V, 50 Hz

KBR960

Full-function 19-inch EIA rack mount keyboard (4 RUs). 120V, 60 Hz

KBR960-X

Same as KBR960 except 230V, 50 Hz

KBD300A\*

Desktop system keyboard with full switching and programming capabilities, plus joystick control of PTZ functions.

KBD200A\*

Desktop keyboard, multi-speed PTZ.

KBD100\*

Desktop keyboard, no PTZ

\* 25-foot cable supplied. If distance between switcher and keyboard exceeds 25 feet or if using more keyboards than the switcher can power, use KBDKIT/KBDKIT-X (CM6800E-48X8 can provide power for two KBD100/200A/300A Series keyboards). KBDKIT/KBDKIT X required when wiring more than one keyboard to a single keyboard port.

### Interface Units

ALM2064

Alarm interface unit, provides alarm monitoring capabilities for up to 64 alarm inputs. 100-240V, 50/60 Hz, auto-ranging. (1 RU)

REL2064

Relay interface unit provides 64 relays for operating peripheral equipment. 100-240V, 50/60 Hz, auto-ranging. (1 RU).

**Note:** Cannot be controlled from KBD100.

## OPTIONAL ACCESSORIES

CM9760-CDU-T

Code distribution unit; 16-channel RS-422 transmit only (2 data wires and ground) distributor. Primarily used for wiring up to 16 pan/tilt/zoom receivers in a "star" configuration.

KBDKIT

Remote keyboard wiring kit; includes two RJ-45 wall blocks and one 120V to 12V transformer. Use when distance between switcher and keyboard exceeds 25 feet or if using more keyboards than the switcher can power (CM6800E-48X8 can provide power for two KBD100/200A/300A Series keyboard). Required when wiring more than one keyboard to a single keyboard port.

KBDKIT-X

Same as KBDKIT except includes 230V to 12V transformer

PV130

Converter kit, RS-232/RS-422, with 12 VDC power supply.

PelcoNet™

Transmission system for PTZ functions, camera control, and remote site viewing. Video management system; graphical map/icon-based user interface for mouse-driven operator control from external PC.

VMX200 Series

## CERTIFICATIONS/RATINGS

- CE, Class B (CM6800E-48X8-X, KBD960/KBR960 Series, ALM2064, and REL2064)
- CE, Class A (CM6800-96X16-X)
- FCC, Class B (KBD960/KBR960 Series, ALM2064, and REL2064)
- FCC, Class A (CM6800-96X16)
- UL Listed (CM6800E-48X8 and CM6800-96X16)
- UL Listed to Canadian safety standards (CM6800E-48X8 and CM6800-96X16)



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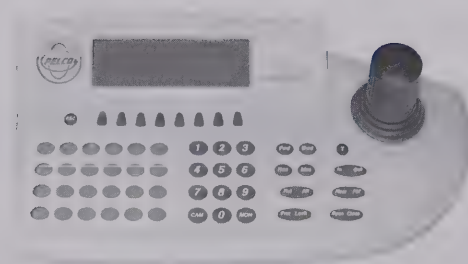
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## KBD960 and KBR960 Keyboards

### FULL FUNCTION, VARIABLE-SPEED, PTZ CONTROL

#### Product Features

- Keyboard to Control CM6800 Matrix Switchers
- Full Function Keyboard Uses Pelco's M Protocol
- Variable-Speed, Vector-Solving Joystick for PTZ and Dome Control
- Joystick Zoom Control Knob
- 24 Programmable Soft Keys, Six Control Keys, and Three Lens Control Keys
- LCD Display Provides Four Lines of Keyboard Information and Options
- Preset Position and Pattern Control
- Auxiliary Operation
- Download Function Key Configurations to and from Other KBD960 Keyboards
- Available as a Desktop (KBD960) Model and a Rack-Mount (KBR960) Model



MATRIX SWITCHERS  
KBD960/KBR960

The **KBD960/KBR960** keyboards provide system users with the maximum degree of flexibility in controlling camera call-up and pan/tilt or dome operation. Twenty-four programmable soft keys may be individually labeled with installation-specific titles. This allows logical camera selection based on the camera's field of view rather than camera numbers.

The **KBD960/KBR960** includes a variable speed, vector-solving joystick with zoom control knob for pan/tilt/zoom and dome control. All additional lens control functions are positioned next to the joystick for one-handed operation. LCD display keys give system operators fingertip control of powerful programming and operational features. These keys access multiple menus of logically displayed icons for simplistic operation. All programmable soft keys illuminate when auxiliaries are activated.

The keyboard utilizes an adjustable backlit LCD screen to provide the greatest amount of flexibility in a variety of lighting conditions. Also, an adjustable audible beeper is provided to alert operators of all alarm conditions. From the keyboard, the user can control auxiliary relay activated devices, receivers, camera/monitor switching, and multiplexer screen functions, and create single/dual patterns, zones, zone labels, presets and preset recalls.



**DataFAX**  
**SPEC:** 21519  
**MANUAL:** Not Available through DataFAX

C1519 / NEW 10-02



U.S. Patent D-464,654

International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

KBD960	Full-function desktop variable-speed keyboard. 120V, 60 Hz wall transformer
KBD960-X	Same as KBD960 except 230V, 50 Hz
KBR960	Full-function 19-inch EIA rack mount keyboard (4 RUs). 120V, 60 Hz
KBR960-X	Same as KBR960 except 230V, 50 Hz

## FUNCTIONAL

Joystick	Vector-solving, variable-speed with zoom
Display	LCD, backlit icon and alphanumeric
Display Keys	Eight multi-function keys to access programming icons and menus
Definable Keys	Twenty-four programmable "soft" keys
Numeric Keys	Numeric keys (0-9) plus (Cam) and (Mon)
Specialty Keys	
(T) "Turbo"	Activates high speed mode of Spectra® domes and Esprit® positioning systems.
(Bkwd/Fwd)	Initiates backward or forward camera sequencing of next/last camera
(Run/Mac)	Initiates sequencing/calls pre-programmed macros
(Rcl/Alt)	Recalls previously selected cameras/calls next camera in group
(Prst/Lock)	Calls preset position scene/locks currently displayed camera to monitor

## ELECTRICAL

Input Voltage	12 VDC from 120V, 60 Hz or 230V, 50 Hz wall transformer (supplied)
Power Consumption	10 watts
Communication	RS-485
Operating Distance	4,000 feet (1,219 m) on 24 AWG wire

## Keyboard Connectors

Two 8-pin RJ-45 connectors (female) (RS-485 serial ports)  
One 4-pin RJ-45 connector (female) (RS-232 serial port)  
Two 6-pin RJ-45 connectors (female)

## Keyboard Communication

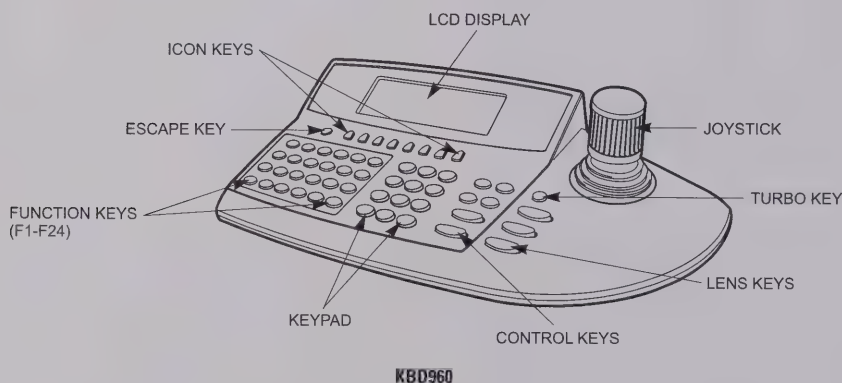
Interface	RS-485
Baud	19200
Communication Parameters	8 data bits, no parity, 1 stop bit

## GENERAL

Ambient Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	
KBD960	3.30" H x 15.53" W x 7.80" D (8.38 x 39.45 x 19.81cm)
KBR960	7.00" H x 19.00" W x 1.75" D (17.78 x 48.26 x 4.45 cm)
	Fits 19-inch EIA Standard rack (4 RUs)
Unit Weight	
KBD960	4.59 lb (2.08 kg)
KBR960	6.40 lb (2.90 kg)
Shipping Weight	
KBD960	9 lb (4.1 kg)
KBR960	11 lb (4.9 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- FCC, Class B
- U.S. Patent D-464,654



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## ALM2064 Alarm Interface Unit

### ALARM GATHERING UNIT FOR UP TO 64 ALARM INPUTS

#### Product Features

- 64 Alarm Contact Inputs
- Connects to the CM6800 Series Matrix Switchers Using Pelco's M Protocol
- Uses RS-485 Communication Interface
- Multiple Units May Be Cascaded to Provide Multiple Alarm Contact Points on a Single M-Port Connection
- Alarm Inputs May Be Configured for Supervised or Unsupervised Mode
- Supports Imports From Normally Open (N.O.) or Normally Closed (N.C.) Contacts
- Powered by an Auto-Ranging Power Supply

The **ALM2064** alarm interface unit connects directly to the System 6800 matrix switcher/controller. Each unit provides monitoring capability for up to 64 external alarm inputs.

Using Pelco's proprietary M protocol, the alarm unit communicates with Pelco's CM6800 matrix switcher via an RS-485 communication interface.

The alarm unit can be located remotely from the system controller and still communicate back to the central system when an alarm occurs.

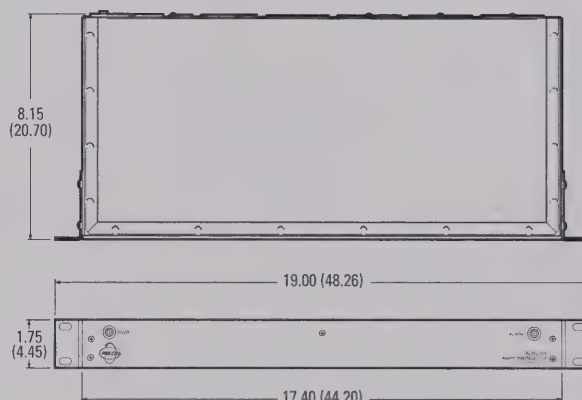
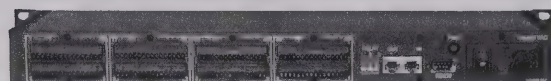
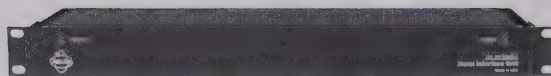
Up to four alarm interface units can be cascaded to provide multiple alarm contact points on a single M-port connection.

Alarm inputs on each **ALM2064** unit can be configured in two groups of 32 each for supervised or unsupervised mode.

The **ALM2064** provides a relay output on the rear panel. The alarm unit will activate a peripheral device connected to this output when a valid alarm condition is sensed.

The alarm interface unit is powered by an auto-ranging power supply.

The **ALM2064** occupies one rack unit (1.75 inches or 4.45 cm), accommodating multiple types of mounting.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES

MATRIX SWITCHERS,  
ALM2064



DataFAX  
SPEC: 21517  
MANUAL: 215176

C1517 / NEW 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

ALM2064

Alarm interface unit; provides alarm monitoring capabilities for up to 64 alarm inputs.  
100-240V, 50/60 Hz, auto-ranging. (1 RU)

## ELECTRICAL

Input Voltage	100-240V, 50/60 Hz, auto-ranging
Power Consumption	30 VA (reactive consumption); 3 watts (active)
Data Ports	
Input	RS-485, RJ-45 connector
Output	RS-485, RJ-45 connector
Indicators	Two power LEDs, green One alarm LED, red
Fusing	500 mA, 250V
Relay Out	Load rating for relay contacts: 0.50A at 125V, 50/60 Hz or 1A at 24 VDC
Operating Distance	4,000 feet (1,219 m) on 24 AWG wire

## MECHANICAL

Connectors	
Alarm Inputs	Four dual-header, 32-input connectors with mating plugs
Power	3-wire, 18 AWG
RS-485	Two RJ-45 connectors
Relay Out	One 3-pin header with mating plug

## GENERAL

Ambient Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	1.75" H x 19.00" W x 8.15" D (4.45 x 48.26 x 20.70 cm)
Mounting	Fits 19-inch EIA Standard rack (1 RU)
Unit Weight	7 lb (3.17 kg)
Shipping Weight	11 lb (4.9 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- FCC, Class B



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## REL2064 Relay Interface Unit

### CONTROLS UP TO 64 RELAY CONTACT OUTPUTS

#### Product Features

- 64 SPST Dry Contact Outputs
- Provides Direct or Automatic Control of Peripheral Equipment
- Connect to the CM6800 Series Matrix Switchers Using Pelco's M Protocol
- Uses RS-485 Communication Interface
- Multiple Units May Be Cascaded to Provide Multiple Relay Contact Points on a Single M-Port Connection
- Relay Output Contacts May Be Configured for Normally Open (N.O.) or Normally Closed (N.C.) Operation
- Relay Groups Can Retain Their Contact Position in the Event of a Power Failure or Front Panel Reset
- Powered by an Auto-Ranging Power Supply

The **REL2064** relay interface unit connects directly to the System 6800 matrix switcher/controller and provides dry contacts for direct or automatic control of peripheral equipment. Each **REL2064** provides up to 64 single-pole, single-throw (SPST) dry contact outputs.

Using Pelco's proprietary M protocol, the relay interface unit communicates with Pelco's CM6800 matrix switcher using an RS-485 communication interface.

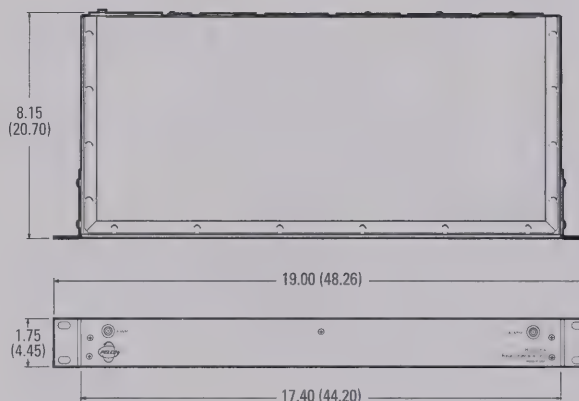
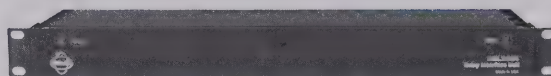
Up to four relay interface units may be cascaded to provide multiple relay contact points on a single CM6800 M-port connection.

Relay output contacts may be configured for normally open (N.O.) or normally closed (N.C.) operation.

The **REL2064** provides a memory feature, which allows relay groups to retain their contact position in the event of a power failure or front panel reset.

The relay interface unit is powered by an auto-ranging power supply.

The **REL2064** occupies one rack unit (1.75 inches or 4.45 cm), accommodating multiple types of mounting.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES

MATRIX SWITCHERS  
REL2064



DataFAX  
SPEC: 21518  
MANUAL: 215186

C1518 / NEW 10-02



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

REL2064

Relay interface unit; provides 64 relays for operating peripheral equipment. 100-240V, 50/60 Hz, auto-ranging. (1 RU)

## ELECTRICAL

Input Voltage	100-240V, 50/60 Hz, auto-ranging
Power Consumption	30 VA (reactive consumption); 5 watts (active)
Data Ports	
Input	RS-485, RJ-45 connector Baud rate selected with DIP switch
Output	RS-485, RJ-45 connector Baud rate selected with DIP switch
Indicators	Two power LEDs, green One data LED, red
Fusing	500 mA, 250V
Relay Output	
Contact Parameters	
Max. Switching Capacity	60 watts
Max. Operating Voltage	125V, 50/60 Hz
Max. Current	2A
Contact Resistance	75 milliohms
Rated Load Parameters	0.5A at 125V, 50/60 Hz 2A at 30 VDC
Operating Distance	4,000 feet (1,219 m) on 24 AWG wire

## MECHANICAL

Connectors	
Relay Inputs	Four dual-header, 32-input connectors with mating plugs
Power	3-wire, 18 AWG
RS-485	Two RJ-45 connectors
Relay Out	One 3-pin header with mating plug

## GENERAL

Ambient Operating Temperature	32° to 122°F (0° to 50°C)
Dimensions	1.75" H x 17.40" W x 8.15" D (4.45 x 44.20 x 20.70 cm)
Mounting	Fits 19-inch EIA Standard rack (1 RU)
Unit Weight	8 lb (3.63 kg)
Shipping Weight	12 lb (5.4 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- FCC, Class B



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## CM9740 Series Matrix

### MICROPROCESSOR-BASED, SWITCHER/CONTROLLER, 256 X 32

#### Product Features

- Modular System Expandable to 256 Inputs and 32 Outputs
- Microprocessor-Based, Full Cross-Point Video Matrix
- Sixteen RS-422 COM Ports and Two RS-232 Full-Duplex Ports Available on the CPU
- Logical Camera Selection
- Priority Level Operation
- Multiplexer and VCR Control Via a Keyboard Controller
- Built-in Video Loss Detection
- Built-in System Diagnostics
- Windows®-Based System Management Software (Windows 98, 2000, XP)
- Factory Tested Pre-Packaged Systems
- ASCII Data Input to Interface Access Control Systems and Other External Systems
- Step-Command Macro Programming
- Remote Viewing and Control Over TCP/IP Networks Using PelcoNet™
- Network Compatibility Allows 9740 Systems in Remote Locations to Communicate with a Centralized, Master 9760 System
- Alarm and Relay Interface to DX9000 Series Digital Video Recorder (DVR)

#### Optional Accessories

- "Hot Switch" and Backup CPU Ensure Uninterrupted Operation
- Redundant Power Supplies for Switching Bays
- Coaxitron Translator Allows PTZ Communication Over Standard Coaxial Cable
- Responds to 5,000 Alarms
- Graphical User Interface (VMX200, VMX300) for Simplified Control from External PC
- DVR Management



**System 9740™** is a full-featured video matrix switching control system for use in medium-sized CCTV installations. This system allows users to control a maximum of 256 cameras to 32 video monitors.

The base configuration for this system is made up of a central processing unit (CC1), a matrix switching bay (MXB), and a keyboard controller (KBD). Optional components may be added to enhance system capabilities.

Powerful macro operation allows activation of commonly occurring events, either manually or automatically, based on time of day, day of week, day of year, and alarms. Macros may call system-wide sequences (tours); activate preset positions and auxiliaries on properly equipped cameras; automate VCR control; and activate external relays to turn lights on, lock doors, and control other auxiliary functions (additional equipment may be required).

**System 9740** also includes built-in video loss detection and system diagnostic features. Video loss detection monitors incoming video signals to alert operators of a camera failure. Diagnostic monitor output (VGA) is included to assist in set-up, programming, and troubleshooting.

Optional VCR management allows VCRs to be controlled directly from the system keyboards. VCRs can be monitored for operational conditions ensuring continuous recording.

Integration with the DX9000 Series Digital Video Recorder allows **System 9740** to monitor and respond to the recorder's video motion detection capabilities. **System 9740** also monitors the operational status of DX9000 recorders on a network to provide fail-safe switchover to standby recorder(s) if a primary recorder(s) fails.

*All CM9740 matrix systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purposes of information only and does not constitute approval or certification of the receiving party. Proof of certification must be provided prior to shipment of CM9740 matrix systems contained herein.*



**DataFAX**  
SPEC: 21508  
MANUAL: Not Available through DataFAX

C1508 / REVISED 1-04



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Registered ISO 9001







## CENTRAL PROCESSING UNIT (CC1)

The central processing unit communicates with external devices and accepts commands from external computers, graphical user interfaces (GUIs), access control systems, casino data systems, programmable logic controllers (PLC), and lighting and intercom systems.

An internal graphics accelerator card is included for displaying system diagnostics and for programming. Sixteen RS-422 COM ports are provided for communication with external devices such as matrix switching bays, pan/tilt or dome receivers, and keyboards.

### ELECTRICAL

Input Voltage	120 VAC, 60 Hz or 230 VAC, 50 Hz, auto-ranging
Power Consumption	35 watts
Processor	Pentium® class CPU
Clock Speed	133 MHz or better
Memory	16 MB RAM
Disk Drive	3.5-inch, 1.44 MB
Flash Disk Storage	16 MB solid-state flash memory
I/O Ports	Sixteen RS-422 communication ports Two RS-232 communication ports One printer port One VGA/SVGA monitor output port One PS/2 mouse port One PS/2-compatible keyboard port

### GENERAL

Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	5.25" H x 19.00" W x 14.25" D (13.34 x 48.26 x 36.20 cm)
Mounting	Fits 19-inch EIA Standard rack (3 RUs)
Unit Weight	13.6 lb (6.18 kg)
Shipping Weight	37 lb (16.82 kg)

### CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B



## MATRIX SWITCHING BAY

The matrix switching bay is a card cage with 16 available card slots for video input modules and one card slot for a video output module (CM9740-VMC series). Each bay includes a power supply and will support modules for up to 256 camera inputs and 16 monitor outputs. A single matrix bay can be configured for up to 256 non-looping video inputs and 16 monitors (standard models) or 128 looping video inputs and 16 monitors ('S' models). A dual bay system can be configured for up to 256 non-looping inputs and 32 monitors (standard models) or 256 looping video inputs and 32 monitors ('L' models).

### ELECTRICAL

Input Voltage	120 VAC, 60 Hz or 230 VAC, 50 Hz
Power Consumption	90 watts maximum (fully populated)
Communication	Full duplex RS-422 using an RJ-45 connector
Inputs	Sixteen input card slots for supporting 256 inputs per bay
Outputs	One output card slot for supporting up to 16 outputs per bay

### VIDEO

Video Input Level	0.5 to 2 Vp-p, RS-170 composite video
Impedance	75 ohms terminating (looping versions available; add "L" or "S" suffix to model number when ordering)
Crosstalk	-60 dB at 3.58 MHz

### GENERAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Dimensions	10.5" H x 19.0" W x 20.0" D (26.67 x 48.26 x 50.80 cm)
Mounting	Fits 19-inch EIA Standard rack (6 RUs)
Unit Weight	21.9 lb (9.93 kg)
	60.0 lb (27.22 kg), fully populated
Shipping Weight	35.0 lb (15.88 kg)
	73.0 lb (33.11 kg), fully populated

### CERTIFICATIONS

- CE, Class A (CM9740-MXB-X)
- FCC, Class A (CM9740-MXB, CM9740-MXBL)
- UL Listed (CM9740-MXB)
- UL Listed to Canadian safety standards (CM9740-MXB)



## KEYBOARD CONTROLLER

The CM9760 keyboard controller allows the user to control the system. Desktop (KBD) and rack-mount (KBR) models are available. The keyboard includes a variable speed, vector-solving joystick with zoom control knob for pan/tilt/zoom (PTZ) and dome control. From the keyboard, the user can control GP-activated devices, receivers, camera/monitor switching, and multiplexer screen functions; and create single/dual patterns, zones, zone labels, presets, and preset recalls. The user can also arm and disarm alarms as well as implement stand-alone, direct mode operation. Twenty-four programmable soft keys can be individually labeled with installation-specific titles allowing logical camera selection based on the camera's field of view rather than camera numbers.

### ELECTRICAL

Input Voltage	12 VDC from 120 VAC, 60 Hz or 230 VAC, 50 Hz wall transformer (supplied)
Power Consumption	10 watts
Communication	RS-422, full duplex
Operating Distance	4,000 feet (1,219 m) on 24 AWG wire
Internal Relay Rating	1 A

### GENERAL

Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	
CM9760-KBD	3.30" H x 15.53" W x 7.80" D (8.38 x 39.45 x 19.81 cm)
CM9760-KBR	7.00" H x 19.00" W x 1.75" D (17.78 x 48.26 x 4.45 cm)
	Fits 19-inch EIA Standard rack (4 RUs)
Unit Weight	
CM9760-KBD	4.6 lb (2.09 kg)
CM9760-KBR	6.4 lb (2.91 kg)
Shipping Weight	
CM9760-KBD	9 lb (4.09 kg)
CM9760-KBR	11 lb (5.00 kg)

### CERTIFICATIONS/PATENTS

- CE, Class A (CM9760-KBD-X)
- CE, Class B (CM9760-KBR-X)
- FCC, Class A (CM9760-KBD and CM9760-KBR)
- U.S. Patent D-464,654

### ADDITIONAL KEYBOARDS

The KBD200A and KBD300A keyboards have also been engineered for use with the CM9740 matrix switcher.

#### KBD200A

The KBD200A provides control of camera/monitor switching; preset, pattern, and sequence operation; local and receiver auxiliary operation; and multiplexer screen functions. The KBD200A also provides push-button control of PTZ functions. (A KBDKIT is required for power.)

#### KBD300A

The KBD300A provides control of camera/monitor switching; preset, pattern, and sequence operation; local and receiver auxiliary operation; and multiplexer screen functions. The KBD300A also provides joystick control of PTZ functions. (A KBDKIT is required for power.)

## MODELS

### CONTROLLER

CM9740-CC1

CPU controller. Operates on 120 VAC, 60 Hz or 230 VAC, 50 Hz. (3 RUs)

### MATRIX BAY

CM9740-MXB

Video matrix bay equipped with CM9760-MPS power supply. 120 VAC, 60 Hz. (6 RUs). Same as CM9760-MXB except 230 VAC, 50 Hz.

CM9740-MXB-X

CM9740-MXBL

Video matrix bay for use with downframe looping cards (CM9760-DFL). No power required. (6 RUs)

CM9760-MPS

Matrix bay power supply (spare). 120 VAC, 60 Hz.

CM9760-MPS-X

Matrix bay power supply (spare). 230 VAC, 50 Hz.

CM9760-DFC

Downframe card and cable assembly; connects multiple matrix bays for expansion purposes.

CM9760-DFL

Same as CM9760-DFC except has looping inputs.

CM9760-RPL

Double-wide rear panel card for single bay looping; maximum number of inputs per bay reduced to 128.

CM9760-VCC

Video camera card capable of accepting up to 16 camera inputs. Also requires a rear panel card (CM9760-DFC, CM9760-DFL, CM9760-RPC, or CM9760-RPL).

CM9760-RPC

Rear panel (BNC) card provides 16 BNC connectors used to connect camera inputs to matrix bay.

CM9740-VMC4

Video monitor card providing 4 monitor outputs; requires CM9760-RPM.

CM9740-VMC8

Video monitor card providing 8 monitor outputs; requires CM9760-RPM.

CM9740-VMC12

Video monitor card providing 12 monitor outputs; requires CM9760-RPM.

CM9740-VMC16

Video monitor card providing 16 monitor outputs; requires CM9760-RPM.

CM9740-VMM

Video monitor module; expands outputs of CM9740-VMC4, CM9740-VMC8 or CM9740-VMC12.

CM9760-RPM

Rear panel monitor card (BNC); provides 16 BNCs to connect monitor outputs to matrix bay; also interfaces video output signals from video output card.

### KEYBOARDS

CM9760-KBD

Full-function desktop variable-speed keyboard. 120 VAC, 60 Hz.

CM9760-KBD-X

Same as CM9760-KBD except 230 VAC, 50 Hz.

CM9760-KBR

Full-function 19-inch EIA rack mount keyboard (4 RUs). 120 VAC, 60 Hz.

CM9760-KBR-X  
KBD200A

Same as CM9760-KBR except 230 VAC, 50 Hz. Desktop keyboard with full switching capabilities, plus push-button control of PTZ functions. 12 VAC or  $\pm 12$  VDC. (Requires KBDKIT for power.)

KBD300A

Desktop keyboard with full switching capabilities, plus joystick control of PTZ functions. 12 VAC or  $\pm 12$  VDC. (Requires KBDKIT for power.)

# SYSTEM COMPONENTS AND ACCESSORIES

## VCR CONTROLLERS

CM9760-VCRC-P	VCR controller; controls Pelco TLR2096, TLR2168, TLR3096, or TLR3168 VCRs. (1 RU)
CM9760-VCRC	VCR controller; controls Sanyo and Sony model VCRs that support resistive ladder remote control and Sony "S-Link" remote control. (64 VCRs per controller.) (1 RU)
CM9760P-IRC-JVC	VCR control card for controlling up to 32 JVC brand VCRs.
CM9760P-IRC-MIT	VCR control card for controlling up to 32 Mitsubishi brand VCRs.
CM9760P-IRC-PAN	VCR control card for controlling up to 32 Panasonic brand VCRs.
CM9760-IRC-TX	VCR control cable (1 per VCR required).
CM9760-VCRC-PTX	VCR control cable; 50-foot cable. Use with CM9760-VCRC-P.
CM9760-VCRC-TX	VCR control cable; 15-foot control cable (1/8-inch jack on one end and bare leads on other end) for connecting VCR to controller.
CM9760-VCRC-C20	Same as CM9760-VCRC-TX except 20-foot (6.1 m) length
CM9760-VCRC-C50	Same as CM9760-VCRC-TX except 50-foot (15.2 m) length

(Please consult Pelco to verify compatibility with selected VCRs.)

## MISCELLANEOUS

CM9760-ALM	Alarm interface unit; connects directly to each system; each unit can monitor up to 64 alarms and up to four units can be daisy-chained off one SERCOM port. (1 RU)
CM9760-CDU-T	Code distribution unit; 16-channel RS-422 transmit only (2 data wires and ground) distributor. Primarily used for wiring up to 16 pan/tilt/zoom receivers in a "star" configuration. (1 RU)
CM9760-CXTA	Coaxitron® translator; generates coaxitron signals for Pelco Coaxitron receivers; each translator supports up to 16 receivers. (1 RU)
CM9760-DMR	Data merger and port expander unit; this unit allows multiple CM9740-CC1 units to control multiple pan/tilt/zoom cameras and allows multiple keyboards to communicate through one CC1 port. (1 RU)
CM9760-DMR-X	Same as CM9760-DMR except 230 VAC, 50 Hz.
VMX200 and VMX300 Series	Video management systems; graphical map/icon-based user interface for mouse driven operator control from external PC.
CM9760-DT	ASCII translator; translates programmed ASCII messages sent from an access control device or device capable of sending valid ASCII messages. 120 VAC, 60 Hz. Desktop model; 1.75" H x 5.50" W x 8.80" D.
CM9760-DT-X	Same as CM9760-DT except 230 VAC, 50 Hz.
CM9760-DT4	Same as CM9760-DT except used to interface ACD devices to RS-422 COM ports on CM9740-CC1. 120 VAC, 60 Hz.
CM9760-DT4-X	Same as CM9760-DT4 except 230 VAC, 50 Hz.
CM9760-HS	Hot switch interface unit; changeover unit that monitors the status of a primary CC1 in a 9740 or 9760 system. (3 components, 1 RU each)

CM9760-MDA

Master distribution amplifier; inserts master time and date from the CM9740-CC1 and a programmable title of up to twenty-four characters on one to sixteen video signals. (3 RUs)

CM9760-MDA-X

Same as CM9760-MDA except 230 VAC, 50 Hz.

CM9760-NW1

Network interface unit; network CPU and software necessary for joining two or more independent systems together. (3 RUs)

CM9760-REL

Relay interface unit; connects directly to each system and provides dry contact switching for direct or automatic control of peripheral equipment; each unit provides up to 64 SPST contact outputs. (1 RU)

CM9760-SAT

16 input satellite video matrix switcher; allows the user to distribute switching capability around a facility, reducing the number of coaxial cable runs to the 9740 and allowing local monitoring at the satellite switch locations. (2 RUs)

CM6800E-48X8

48 input satellite video matrix switcher; same functionality as CM9760-SAT except supports up to 48 inputs. (3 RUs)

## COMPATIBLE RECEIVERS

Spectra® Series  
ERD97P21-U  
LRD41C21-1/-2/-3  
LRD41C22-1/-2/-3

Spectra dome multiple protocol receiver.  
Pelco P protocol receiver.  
Legacy®, fixed speed receiver with presets.  
Same as LRD41C21 Series except variable speed receiver.

Esprit®  
Coaxitron

Integrated pan/tilt positioning receiver.  
Coaxitron translator allows Coaxitron control of PTZ cameras.

RU = Rack Unit. One RU is equivalent to 1.75 inches (4.45 cm) of vertical space. Identifies number of rack units required to mount component in a 19-inch EIA Standard rack mount.



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# CM9760 Series Matrix

## MICROPROCESSOR-BASED SWITCHER/CONTROLLER, 2,048 INPUTS, 512 OUTPUTS

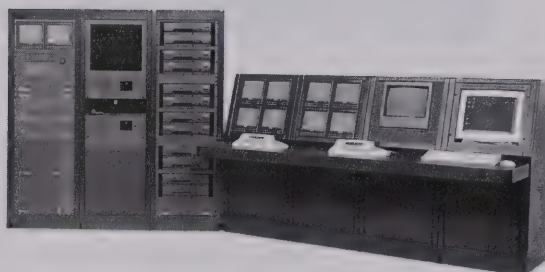
### Product Features

- Microprocessor-Based, Full Cross-Point Video Matrix
- Single Node CPU Systems Control up to 2,048 Cameras and 512 Monitors
- Virtually Unlimited Expansion Using Networked Nodes (up to 24 nodes)
- Sixteen RS-422 COM Ports (Expandable to 120) and Two RS-232 Full-Duplex Ports Available on the CPU
- Logical Camera Selection
- Priority Level Operation
- Multiplexer and VCR Control Via Keyboard
- Built-in Video Loss Detection
- Built-in System Diagnostics
- Windows®-Based System Management Software (Windows 98, 2000, XP)
- Factory Tested Pre-Packaged Systems
- ASCII Data Input to Interface Access Control and Other External Computer-Based Systems
- Step-Command Macro Programming
- Remote Viewing and Control Over TCP/IP Networks Using PelcoNet™
- Alarm and Relay Interface to DX9000 Series Digital Video Recorder (DVR)

### Optional Accessories

- "Hot Switch" and Backup CPU Ensure Uninterrupted Operation
- Redundant Power Supplies for Switching Bays
- Coaxitron Translator Allows PTZ Communication Over Standard Coaxial Cable
- Responds to 5,000 Alarms
- Network Interface Unit Allows Multiple Systems to Share Video and Control
- Graphical User Interface (VMX200, VMX300) for Simplified Control from External PC
- DVR Management

*Note: All CM9760 matrix systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purposes of information only and does not constitute approval or certification of the receiving party. Proof of certification must be provided prior to shipment of CM9760 matrix systems contained herein.*



MATRIX SWITCHERS  
CM9760 MATRIX

**System 9760®** is a full-featured video matrix switching control system that allows users to view and control up to 2,048 cameras and 512 monitors on a single node. Up to 96 individual user-defined ID numbers can be assigned to allow or deny access to system functions.

The base configuration for this system is made up of a central processing unit (CC1), matrix switching bay(s) (MXBs) with video input/output modules, and keyboard controllers (KBDs). Optional components can be added to enhance system capabilities.

Powerful macro operation allows activation of commonly occurring events, either manually or automatically, based on time of day, day of week, day of year, and alarms. Macros may call system-wide sequences (tours); activate preset positions and auxiliaries on properly equipped cameras; automate VCR control; and activate external relays to turn lights on, lock doors, and control other auxiliary functions (additional equipment may be required).

**System 9760** also includes built-in video loss detection and system diagnostic features. Video loss detection monitors incoming video signals to alert operators of a camera failure. Diagnostic monitor outputs are included to assist in set-up, programming, and troubleshooting.

Optional VCR management allows VCRs to be controlled directly from the system keyboards. Suitable VCRs can be monitored for operational conditions ensuring continuous recording.

Integration with the DX9000 Series Digital Video Recorder allows **System 9760** to monitor and respond to the recorder's video motion detection capabilities. **System 9760** also monitors the operational status of DX9000 recorders on a network to provide fail-safe switchover to standby recorder(s) if a primary recorder(s) fails.



DataFAX  
SPEC: 2540

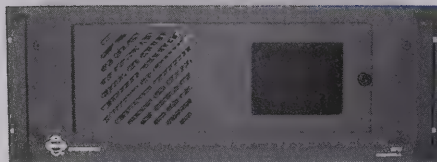
MANUAL: Not Available through DataFAX

C540 / REVISED 1-04



International Organization  
for Standardization  
Registered ISO 9001





## CENTRAL PROCESSING UNIT (CC1)

The central processing unit communicates with external devices and accepts commands from external computers, keyboards, graphical user interfaces (GUIs), access control systems, casino data systems, programmable logic controllers (PLC), and lighting and intercom systems.

An internal graphics accelerator card is included for displaying system diagnostics and for programming. Sixteen RS-422 COM ports (expandable to 32) are provided for communication with external devices such as matrix switching bays, pan/tilt or dome receivers, and keyboards. A total of 120 RS-422 COM ports can be achieved by adding three CM9760-SER32 port expansion units (32 ports per unit).

### ELECTRICAL

Input Voltage	120 VAC, 60 Hz or 230 VAC, 50 Hz, auto-ranging
Power Consumption	55 watts
Processor	Pentium® class CPU
Clock Speed	733 MHz
Memory	64 MB RAM
Disk Drive	3.5-inch, 1.44 MB
Flash Disk Storage	32 MB solid-state flash memory
Diagnostic Monitor Output	One VGA, one RCA (composite video, NTSC, or PAL), One S-Video
I/O Ports	Sixteen RS-422 (expandable to 32); total system capability is 120 ports.* Two RS-232 One parallel printer port One VGA output port Two TV Out ports Two PC-AT compatible keyboard ports (one front, one rear)

### GENERAL

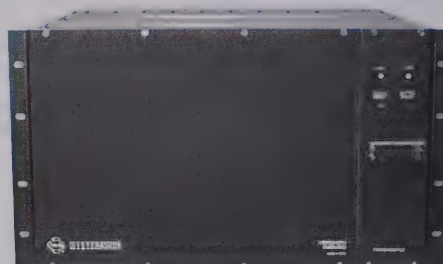
Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	7.0" H x 19.0" W x 19.5" D (17.78 x 48.26 x 49.53 cm)
Mounting	Fits 19-inch EIA Standard rack (4 RUs)
Unit Weight	26.5 lb (12.02 kg)
Shipping Weight	53 lb (24 kg)

### CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

\* The CM9760-CC1 is equipped with 16 RS-422 COM ports; total capacity can be expanded to 32 ports by adding two CM9760-SER serial communication cards (8 ports each).

Total system capability can be expanded to 120 RS-422 COM ports by adding three CM9760-SER-32 port expansion units (32 ports each) to the CC1.



## MATRIX SWITCHING BAY

The matrix switching bay is a card cage with 16 available card slots for video input modules (VCCs) and one card slot for the video output module (VMC). Each bay includes a power supply and will support modules for up to 256 camera inputs and 16 monitor outputs. Multiple bays can be used to expand a single 9760 CPU system to a maximum of 2,048 camera inputs and 512 monitor outputs. An optional backup power supply module (MPS) can be installed in each bay to provide redundancy.

### ELECTRICAL

Input Voltage	120 VAC, 60 Hz or 230 VAC, 50 Hz
Power Consumption	90 watts maximum (fully populated)
Communication	Full duplex RS-422 using an RJ-45 connector

### VIDEO

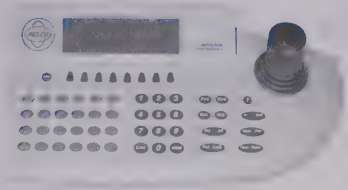
Inputs	Sixteen input card slots for supporting 256 inputs per bay
Outputs	One output card slot for supporting 16 outputs per bay
Video Input Level	0.5 to 2 Vp-p, RS-170 composite video
Impedance	75 ohms terminating (looping versions available)
Crosstalk	-60 dB at 3.58 MHz

### GENERAL

Operating Temperature	14° to 122°F (-10° to 50°C)
Dimensions	10.5" H x 19.0" W x 20.0" D (26.67 x 48.26 x 50.80 cm)
Mounting	Fits 19-inch EIA Standard rack (6 RUs)
Unit Weight	21.9 lb (9.93 kg) 60.0 lb (27.22 kg), fully populated
Shipping Weight	35.0 lb (15.88 kg) 73.0 lb (33.11 kg), fully populated

### CERTIFICATIONS

- CE, Class A (CM9760-MXB-X)
- UL Listed (CM9760-MXB)
- UL Listed to Canadian safety standards (CM9760-MXB)
- FCC, Class A (CM9760-MXB)



## KEYBOARD CONTROLLER

The CM9760 keyboard controller allows the user to control the system. Desktop (KBD) and rack-mount (KBR) models are available. The keyboard includes a variable speed, vector-solving joystick with zoom control knob for pan/tilt/zoom (PTZ) and dome control. From the keyboard, the user can control GPI-activated devices, receivers, camera/monitor switching, and multiplexer screen functions, and create single/dual patterns, zones, zone labels, presets and preset recalls. The user can also arm and disarm alarms as well as implement stand-alone, direct mode operation. Twenty-four programmable soft keys can be individually labeled with installation-specific titles allowing logical camera selection based on the camera's field of view rather than camera numbers.

### ELECTRICAL

Input Voltage	12 VDC from 120 VAC, 60 Hz or 230 VAC, 50 Hz wall transformer (supplied)
Power Consumption	10 watts
Communication	RS-422, full duplex
Operating Distance	4,000 feet (1,219 m) on 24 AWG wire
Internal Relay Rating	1 A

### GENERAL

Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	
CM9760-KBD	3.30" H x 15.53" W x 7.80" D (8.38 x 39.45 x 19.81 cm)
CM9760-KBR	7.00" H x 19.00" W x 1.75" D (17.78 x 48.26 x 4.45 cm)
	Fits 19-inch EIA Standard rack (4 RUs)
Unit Weight	
CM9760-KBD	4.6 lb (2.09 kg)
CM9760-KBR	6.4 lb (2.91 kg)
Shipping Weight	
CM9760-KBD	9 lb (4.09 kg)
CM9760-KBR	11 lb (5.00 kg)

### CERTIFICATIONS/PATENTS

- CE, Class A (CM9760KBD-X) and Class B (CM9760-KBR-X)
- FCC, Class A (CM9760-KBD and CM9760-KBR)
- U.S. Patent D-464,654

### ADDITIONAL KEYBOARDS

The KBD200A and KBD300A keyboards have also been engineered for use with the CM9760 matrix switcher.

#### KBD200A

The KBD200A provides control of camera/monitor switching; preset, pattern, and sequence operation; local and receiver auxiliary operation; and multiplexer screen functions. The KBD200A also provides push-button control of PTZ functions. (A KBDKIT is required for power.)

#### KBD300A

The KBD300A provides control of camera/monitor switching; preset, pattern, and sequence operation; local and receiver auxiliary operation; and multiplexer screen functions. The KBD300A also provides joystick control of PTZ functions. (A KBDKIT is required for power.)

## MODELS

### CONTROLLER

CM9760-CC1
CM9760-SER
CM9760-CC1-VID

### MATRIX BAY

CM9760-MXB
CM9760-MXB-X
CM9760-MXBL
CM9760-MPS
CM9760-MPS-X
CM9760-DFC
CM9760-DFL
CM9760-RPL
CM9760-VCC
CM9760-RPC
CM9760-VMC4
CM9760-VMC8
CM9760-VMC12
CM9760-VMC16
CM9760-VMM
CM9760-RPM

### KEYBOARDS

CM9760-KBD
CM9760-KBD-X
CM9760-KBR
CM9760-KBR-X
KBD200A
KBD300A

CPU controller. Operates on 120 VAC, 60 Hz or 230 VAC, 50 Hz. (3 RUs)  
Serial communication card (RS-422 SERCOM) provides eight communications ports to interface peripheral equipment (4 maximum per CPU.)  
CPU VGA card; includes outputs for composite, S-Video, and VGA display of system diagnostics and programming.

Video matrix bay equipped with CM9760-MPS power supply. 120 VAC, 60 Hz. (6 RUs).  
Same as CM9760-MXB except 230 VAC, 50 Hz.  
Video matrix bay for use with downframe looping cards (CM9760-DFL). No power required. (6 RUs)  
Matrix bay power supply (spare). 120 VAC, 60 Hz.  
Matrix bay power supply (spare). 230 VAC, 50 Hz.  
Downframe card and cable assembly; connects multiple matrix bays for expansion purposes.  
Same as CM9760-DFC except has looping inputs.  
Double-wide rear panel card for single bay looping; maximum number of inputs per bay reduced to 128.  
Video camera card capable of accepting up to 16 camera inputs. Also requires a rear panel card (CM9760-DFC, CM9760-DFL, CM9760-RPC, or CM9760-RPL).  
Rear panel (BNC) card provides 16 BNC connectors used to connect camera inputs to matrix bay.  
Video monitor card providing 4 monitor outputs; requires CM9760-RPM.  
Video monitor card providing 8 monitor outputs; requires CM9760-RPM.  
Video monitor card providing 12 monitor outputs; requires CM9760-RPM.  
Video monitor card providing 16 monitor outputs; requires CM9760-RPM.  
Video monitor module; expands outputs of CM9760-VMC4, CM9760-VMC8 or CM9760-VMC12.  
Rear panel monitor card (BNC); provides 16 BNCs to connect monitor outputs to matrix bay; also interfaces video output signals from video output card.

Full-function desktop variable-speed keyboard. 120 VAC, 60 Hz.  
Same as CM9760-KBD except 230 VAC, 50 Hz.  
Full-function 19-inch EIA rack mount keyboard (4 RUs). 120 VAC, 60 Hz.  
Same as CM9760-KBR except 230 VAC, 50 Hz.  
Desktop keyboard with full switching capabilities, plus push-button control of PTZ functions. 12 VAC or  $\pm 12$  VDC. (Requires KBDKIT for power.)  
Desktop keyboard with full switching capabilities, plus joystick control of PTZ functions. 12 VAC or  $\pm 12$  VDC. (Requires KBDKIT for power.)



## VCR CONTROLLERS

CM9760-VCRC-P	VCR controller; controls Pelco TLR2096, TLR2168, TLR3096, or TLR3168 VCRs. (1 RU)
CM9760-VCRC	VCR controller; controls Sanyo and Sony model VCRs that support resistive ladder remote control and Sony "S-Link" remote control. (64 VCRs per controller.) (1 RU)
CM9760P-IRC	Infrared VCR controller card cage; controls VCR functions using infrared. (128 VCRs/cage max.) (3RUs)
CM9760P-IRC-JVC	VCR control card for controlling up to 32 JVC brand VCRs.
CM9760P-IRC-MIT	VCR control card for controlling up to 32 Mitsubishi brand VCRs.
CM9760P-IRC-PAN	VCR control card for controlling up to 32 Panasonic brand VCRs.
CM9760P-IRC-SHP	VCR control card for controlling up to 32 Sharp brand VCRs.
CM9760-IRC-TX	VCR control cable (1 per VCR required).
CM9760-VCRC-PTX	VCR control cable; 50-foot cable for use with CM9760-VCRC-P.
CM9760-VCRC-TX	VCR control cable; 15-foot control cable (1/8-inch jack on one end and bare leads on other end) for connecting VCR to controller.
CM9760-VCRC-C20	Same as CM9760-VCRC-TX except 20-foot (6.1 m) length
CM9760-VCRC-C50	Same as CM9760-VCRC-TX except 50-foot (15.2 m) length

(Please consult Pelco to verify compatibility with selected VCRs.)

## MISCELLANEOUS

CM9760-ALM	Alarm interface unit; connects directly to each system; each unit can monitor up to 64 alarms and up to four units can be daisy-chained off one SERCOM port. (1 RU)
CM9760-CDU-T	Code distribution unit; 16-channel RS-422 transmit only (2 data wires and ground) distributor. Primarily used for wiring up to 16 pan/tilt/zoom receivers in a "star" configuration. (1 RU)
CM9760-CXTA	Coaxitron® translator; generates coaxitron signals for Pelco Coaxitron receivers; each translator supports up to 16 receivers. (1 RU)
CM9760-DMR	Data merger and port expander unit; this unit allows multiple CM9760-CC1 units to control multiple pan/tilt/zoom cameras and allows multiple keyboards to communicate through one CC1 port. (1 RU)
CM9760-DMR-X	Same as CM9760-DMR except 230 VAC, 50 Hz.
VMX200 and VMX300 Series	Video management systems; graphical map/icon-based user interface for mouse driven operator control from external PC.

## CM9760-DT

### CM9760-DT-X CM9760-DT4

### CM9760-DT4-X CM9760-HS

### CM9760-MDA

### CM9760-MDA-X CM9760-NW1

### CM9760-REL

### CM9760-RKIT

### CM9760-SAT

### CM9760-SER-32

### CM6800E-48X8

ASCII translator; translates programmed ASCII messages sent from an access control device or device capable of sending valid ASCII messages. 120 VAC, 60 Hz. Desktop model; 1.75" H x 5.50" W x 8.80" D.

Same as CM9760-DT except 230 VAC, 50 Hz. Same as CM9760-DT except used to interface ACD devices to RS-422 COM ports on CM9760-CC1.

Same as CM9760-DT4 except 230 VAC, 50 Hz. Hot switch interface unit; changeover unit that monitors the status of a primary CC1 in a 9760 system. (3 components, 1 RU each)

Master distribution amplifier; inserts master time and date from the CM9760-CC1 and a programmable title of up to twenty-four characters on one to sixteen video signals. (3 RUs)

Same as CM9760-MDA except 230 VAC, 50 Hz. Network interface unit; network CPU and software necessary for joining two or more independent systems together. (3 RUs)

Relay interface unit; connects directly to each system and provides dry contact switching for direct or automatic control of peripheral equipment; each unit provides up to 64 SPST contact outputs. (1 RU)

Eight RJ-45 to DB9 converters for retrofitting CM9760-CC1 with CM9750 peripherals.

16 input satellite video matrix switcher; allows the user to distribute switching capability around a facility, reducing the number of coaxial cable runs to the 9760 and allowing local monitoring at the satellite switch locations. (2 RUs)

Port expansion unit; 32 SERCOM ports per unit. Up to three units can be added to a CC1. (Check with Pelco Systems Applications Department before adding to an existing CM9760-CC1). Includes interconnecting cables and adapters for DB9 and RJ45 connectors. Data interface can be RS-232 or RS-422. (4 RUs)

48 input satellite video matrix switcher; same functionality as CM9760-SAT except supports up to 48 inputs. (3 RUs)

## COMPATIBLE RECEIVERS

Spectra® Series  
ERD97P21-U  
LRD41C21-1/-2/-3  
LRD41C22-1/-2/-3

Esprit®  
Coaxitron

Spectra dome multiple protocol receiver.

Pelco P protocol receiver.

Legacy®, fixed speed receiver with presets.

Same as LRD41C21 Series except variable speed receiver.

Integrated pan/tilt positioning receiver.

Coaxitron translator allows Coaxitron control of PTZ cameras.

RU = Rack Unit. One RU is equivalent to 1.75 inches (4.45 cm) of vertical space. Identifies number of rack units required to mount component in a 19-inch EIA Standard rack mount.

Indicates change or addition.



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## CM9760-ALM Alarm Interface Unit

### ALARM GATHERING UNIT FOR UP TO 64 ALARM INPUTS

#### Product Features

- Each Unit Can Handle Up to 64 Alarms
- Up to Four Units Can Be Daisy-Chained From One CM9700 Series CC1 SERCOM Port for a Total of 256 Alarms
- Alarm Inputs Can Be Configured in Groups of 16 for Supervised or Unsupervised Mode
- Alarm Inputs in Groups of 16 Can Be Wired Either Normally Open or Normally Closed
- Each Unit Has One Common Alarm Relay Output
- Each Unit is Powered by an Auto-Ranging Power Supply

The **CM9760-ALM** uses an RS-232/422 communication interface with the CM9700 Series system controllers. The unit can be remotely placed with respect to the controller, from where it can communicate back to the central system when an alarm occurs. The alarm unit is capable of handling up to 64 alarm inputs.

The front of the **CM9760-ALM** has two 10-position DIP switches, which allow the configuration of each unit. Also, a red LED flashes whenever there is a valid alarm condition.

The relay output connector accepts a screw terminal adapter. When a valid alarm condition is sensed, the alarm unit will activate the relay. It will deactivate only when the alarms are no longer present.

The alarm unit mounts in a standard 19-inch (48.3 cm) rack and occupies only 1 RU (1.75 inches or 4.45 cm) of rack space. For remote operation, the wiring from the alarm unit to the system controller should not exceed 4,000 feet. Daisy-chaining configurations can be used whether alarm units are situated locally, remotely, or as a combination of the two.

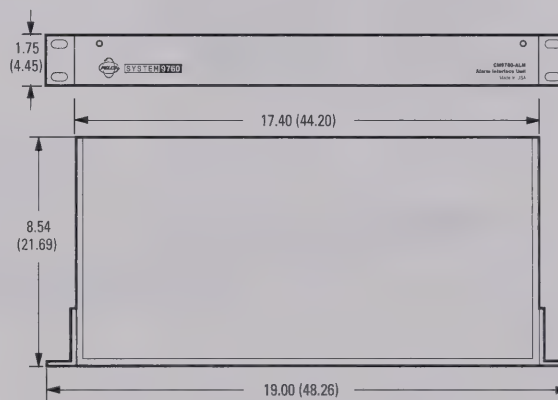
The 64th input on an alarm unit can be used as an alarm output to report a data communication failure.



CM9760-ALM FRONT VIEW



CM9760-ALM REAR VIEW



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2572  
MANUAL: 25726

C572 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

CM9760-ALM

Alarm interface unit

## ELECTRICAL

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	30 VA (reactive consumption); 3 watts (active)
Data Ports	
Input	RS-232, DB9 connector RS-422, RJ-45 connector
Output	RS-422, RJ-45 connector
Indicators	Two power LEDs, green One alarm LED, red
Fusing	500 mA, 250 V
Relay Out	Load rating or relay contacts: 0.50 A at 125 VAC or 1 A at 24 VDC
Operating Distance	4,000 feet (1,219 m) on 24 AWG

## MECHANICAL

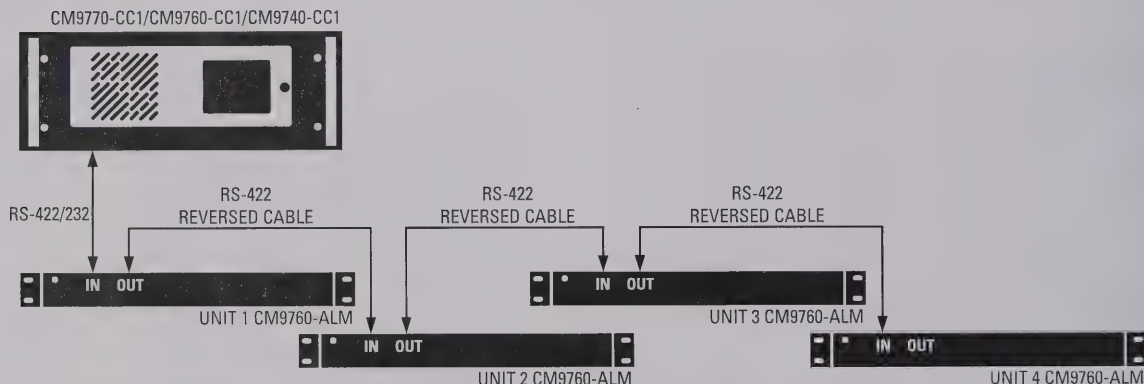
Connectors	
Alarm Input and Relay Out	Removable mating screw terminal; supports 14-22 AWG

## GENERAL

Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	
Base Only	1.75" H x 17.40" W x 8.54" D (4.45 x 44.20 x 21.69 cm)
With Rack Ears	1.75" H x 19.00" W x 8.54" D (1 RU) (4.45 x 48.26 x 21.69 cm)
Mounting	Fits 19-inch EIA Standard rack
Unit Weight	7.0 lb (3.18 kg)
Shipping Weight	12 lb (5.45 kg)

## CERTIFICATIONS

- CE, Class B
- FCC, Class B



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## CM9760-CDU-T Code Distribution Unit

### 16-CHANNEL TRANSMIT-ONLY DISTRIBUTOR

#### Product Features

- Two 8-Position, RJ-45 Parallel Connectors Provide an Input from a Controller and an Output for an Additional Daisy-Chained CDU Unit
- Sixteen 3-Position Screw Terminal Connectors Used to Output 16 RS-422 Transmit-Only Code Lines
- Allows for Home Run (Star) Type Wiring of PTZ Data Lines
- Standard 100-240 VAC, 50/60 Hz Line Input (Auto-Ranging)
- Provides 16 Driver Outputs

The **CM9760-CDU-T** code distribution unit is a 16-channel RS-422 transmit-only (2 data wires and ground) data distribution unit. It was designed as an accessory for System 9760®, but it can be used with any system that uses RS-422 serial communications. The CDU is used to install pan/tilt and dome receivers in a "star" or "home run" configuration.

The unit is rack/wall mountable and is only 6 inches deep (15.2 cm). In addition to the 16 lines available for output with one unit, eight CDUs may be daisy-chained. This allows 128 receivers (that support 128 address settings) to be connected on a single SERCOM port.

The remote devices can be located as far as 4,000 feet (1,219 m) away from the controller, depending on the physical parameters of the connection.

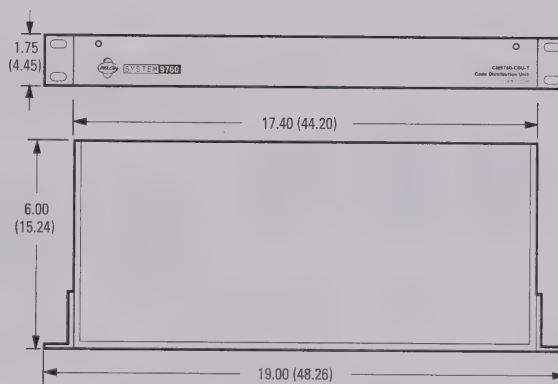
The unit is ideal for use on larger switching systems where it becomes desirable to "home run" the RS-422 data lines for controlling pan/tilt or dome receivers.



CM9760-CDU-T (FRONT)



CM9760-CDU-T (BACK)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

MATRIX SWITCHERS  
CM9760-CDU-T



DataFAX  
SPEC: 21940  
MANUAL: 219406

C1940 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

CM9760-CDU-T

Code distribution unit

## ELECTRICAL

Input Voltage

100-240 VAC, 50/60 Hz, auto-ranging or independent external source, 10-24 VAC/VDC 30 VA

Power Consumption

Data Ports

Input

Output

Drive Lines

One RS-422, RJ-45 female connector  
One RS-422, RJ-45 female connector  
Sixteen 3-position screw terminals with mating plugs

Fusing

500 mA, 250V

Indicators

One power LED (green)

One data LED (red)

## MECHANICAL

Connectors

Power

RS-422

RS-422 Breakout Ports

AC power cord input, 3-wire, 18 AWG

Two RJ-45, female

Sixteen 3-pin headers with mating plug; connectors can accept 14-28 AWG

## GENERAL

Dimensions

Base Only

1.75" H x 17.40" W x 6.00" D

(4.45 x 44.20 x 15.24 cm)

With Rack Ears

1.75" H x 19.00" W x 6.00" D (1 RU)

(4.45 x 48.26 x 15.24 cm)

Mounting

Fits 19-inch EIA Standard rack

Operating Temperature

32° to 122°F (0° to 50°C)

Unit Weight

4.2 lb (1.91 kg)

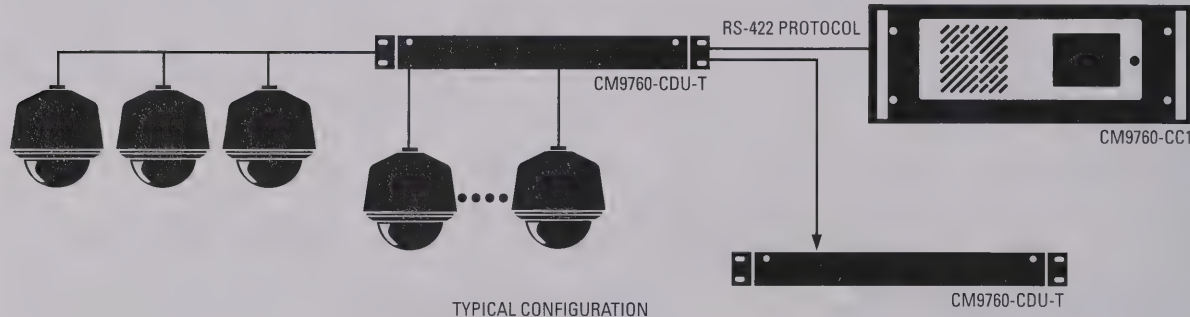
Shipping Weight

9 lb (4.09 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- FCC, Class B
- Meets NEMA Type 1 standards

NOTE: OTHER RS-422 PROTOCOL DEVICES INCLUDE THE CM9740-CC1, CM9770-CC1, CM6800, CM9760-DMR, AND KBD300A (DIRECT MODE).



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[www.pelco.com](http://www.pelco.com)

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# CM9760-CXTA Coaxitron® Translator

## INTERFACE UNIT FOR COAXITRON-CAPABLE RECEIVERS

### Product Features

- Allows Coaxitron Control From Any RS-422 P or D Protocol Device
- 16 Looping Video Inputs Allow for Easy Connection Between Switch and Cameras
- Send PTZ Control Commands on a Camera's Video Cable
- Fits a Standard 19-Inch Rack Mount

The **CM9760-CXTA** is designed to interface Pelco's matrix switchers that use P protocol with Pelco's receivers that use Coaxitron® protocol for command and control functions.

The **CM9760-CXTA** will also interface Pelco's DX7000 digital video recorder that uses D protocol with Pelco's receivers that use Coaxitron protocol for command and control functions.

CX9000, Legacy®, Intercept®, Spectra®, and Esprit® receivers can be used with the **CM9760-CXTA**.

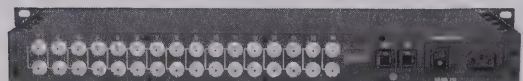
The 32 BNCs are looped into the unit. Each BNC on the top row is paired with a BNC on the bottom row. This allows either the top or bottom BNCs to be selected as an input or output to communicate to or from the receiver.

The rear of the **CM9760-CXTA** also has input and output connectors that allow two translator units to be cascaded. This makes 32 Coaxitron ports available which can be controlled from one RS-422 communication port on a System 9700 Series CC1.

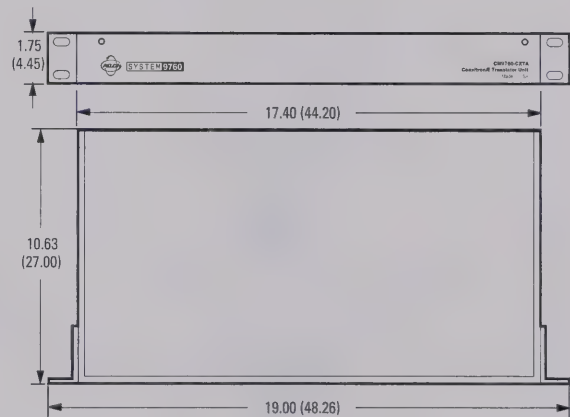
The 8-position DIP switch allows the protocol for the BNC inputs to be set to either 15 bits or 32 bits. The DIP switch is also used to configure P or D protocol, and data rates.



CM9760-CXTA FRONT VIEW



CM9760-CXTA REAR VIEW



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2539  
MANUAL: Not Available through DataFAX

C539 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



MATRIX SWITCHERS  
CM9760-CXTA



# TECHNICAL SPECIFICATIONS

## MODEL

CM9760-CXTA

Coaxitron translator

## ELECTRICAL

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	15 VA
Coaxitron Ports	
Video Format	NTSC or PAL
Video Level	±6 dB minimum
Coaxitron Level	0.7 V peak
Data Ports	
Input	RS-422, 8-way, 4-wire, RJ-45 connector DIP-switch selectable baud rate, even parity
Output	RS-422, 8-way, 4-wire, RJ-45 connector DIP-switch selectable baud rate, even parity
Indicators	Power LED (green)
Fusing	1/4A, 250 VAC

## MECHANICAL

Connectors	
Video	BNC type (32 total)
Power	3-wire, 18 AWG
RS-422	RJ-45 (8-way), connectors (2 total)

## GENERAL

Dimensions	
Base Only	1.75" H x 17.40" W x 10.63" D (4.45 x 44.20 x 27.00 cm)
With Rack Ears	1.75" H x 19.00" W x 10.63" D (1 RU) (4.45 x 48.26 x 27.00 cm)
Mounting	Fits 19-inch EIA Standard rack
Operating Temperature	32° to 158°F (0° to 70°C)
Unit Weight	5.7 lb (2.59 kg)
Shipping Weight	13 lb (5.91 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- FCC, Class B
- Meets NEMA Type 1 standards

## COMPATIBLE DEVICES

CM9770-CC1  
CM9760-CC1  
CM9740-CC1  
KBD200A (Direct Mode)  
KBD300A (Direct Mode)  
CM9760-KBD (Direct Mode)  
DX7000 (Digital Video Recorder)

### RECEIVER/DRIVERS "TYPE"



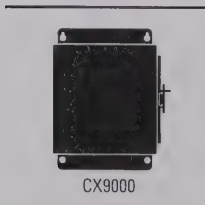
AND



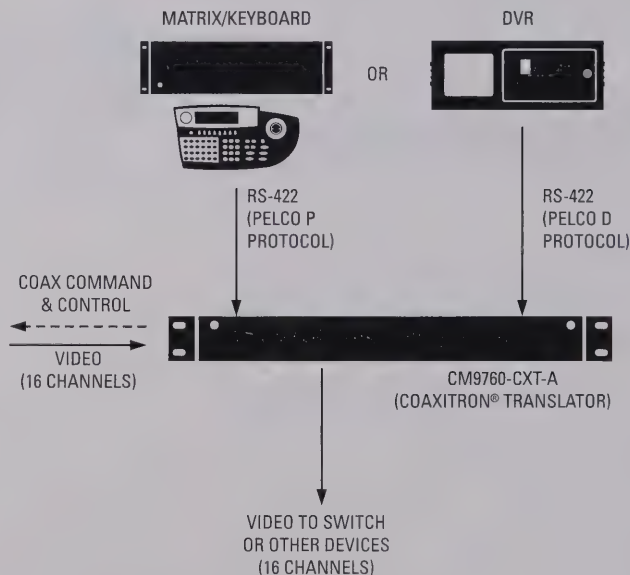
OR



AND



CM9760-KBD (DIRECT MODE)  
DX7000 (DIGITAL VIDEO RECORDER)



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## CM9760-DMR Data Manager

### SERCOM PORT EXPANSION/DATA MERGER UNIT

#### Product Features

- Choose One of Three Different Operating Modes: Keyboard Expander, Camera Control Expander, or Data Merger
- Connect Up to Four CM9760-KBD Keyboards to One Data Port
- Address Up to 64 PTZ Cameras From One Data Port
- Allow Up to Four Matrix Switchers, DVRs, or Direct Keyboards to Share Control of Up to 32 PTZ Cameras
- Both RJ-45 Connectors and Screw Terminals Are Provided for Each Data Port
- Diagnostic LEDs Identify the Amount of Data Activity for Each Port

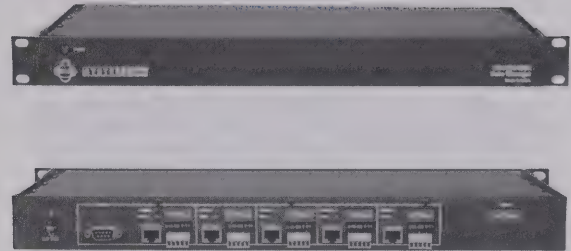
The **CM9760-DMR** is a data manager package that provides a four-to-one expansion of the number of data (SERCOM) ports available on a CM9740, CM9760, or CM9770 central processing unit (CPU). It may be used with System 9700 Series matrix switchers in three basic applications: To expand the number of cameras controlled through a port (Camera Control Expander), to expand the number of keyboards connected to a port (Keyboard Expander), and to interface up to four networked CPUs to control a common group of cameras (Data Merger).

When configured for use as a Keyboard Expander, the **CM9760-DMR** allows up to four CM9760-KBD keyboards to be connected to one SERCOM port on the CM9770, CM9760, or CM9740 CPU.

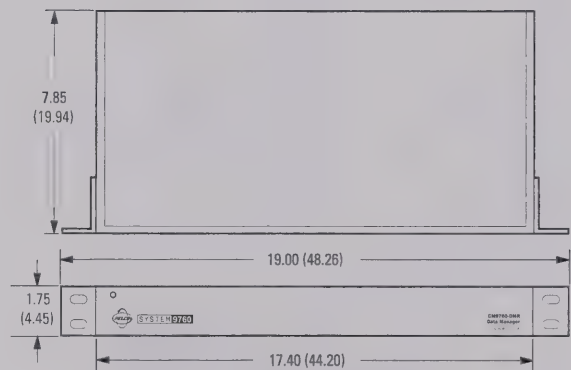
When configured for use as a Camera Control Expander, the **CM9760-DMR** allows addressing of up to 64 PTZ cameras from one SERCOM port on the CM9770, CM9760, or CM9740 CPU.

When configured for use as a Data Merger, the **CM9760-DMR** allows up to four matrix switchers or other devices to share control of up to 32 cameras via Pelco's D or P protocol.

In the Data Merger configuration the **CM9760-DMR** can also interface control from as many as four non-matrix controllers to up to 32 cameras. Devices include direct mode KBD300A keyboards, Pelco-Nets, and other Pelco control products using P protocol. Priority can be assigned to each device with this configuration.



MATRIX SWITCHERS  
CM9760-DMR



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



**DataFAX**  
**SPEC:** 21520  
**MANUAL:** Not Available through DataFAX

C1520 / REVISED 12-03

International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

CM9760-DMR  
CM9760-DMR-X

Data manager, 120 VAC  
Data manager, 230 VAC

## ELECTRICAL

Input Voltage

CM9760-DMR

120 VAC external adapter

CM9760-DMR-X

230 VAC external adapter

Power

25 VA

Data Ports

Input/Output

(5) RJ-45 connectors, (5) screw terminal connectors, (1) DB9 connector

Indicators

One green power LED

Five green port LEDs

Five yellow data LEDs

## MECHANICAL

Connectors

Power

9.0 VAC jack

Data Communication

RJ-45, screw terminals, DB9

## GENERAL

Operating Temperature

32° to 122°F (0° to 50°C)

Construction

Aluminum

Finish

Black polyester powder coat

Dimensions

Base Only

1.75" H x 17.40" W x 7.85" D

(4.45 x 44.20 x 19.94 cm)

With Rack Ears

1.75" H x 19.00" W x 7.85" D (1 RU)

(4.45 x 48.26 x 19.94 cm)

Mounting

Fits 19-inch EIA Standard rack

Unit Weight

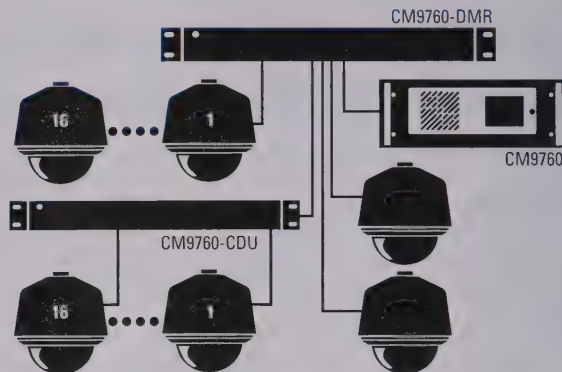
5.2 lb (2.36 kg)

Shipping Weight

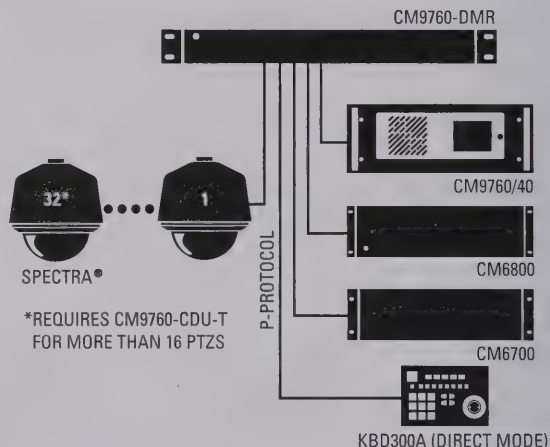
9 lb (4.09 kg)

## CERTIFICATIONS

- FCC, Class A (CM9760-DMR)

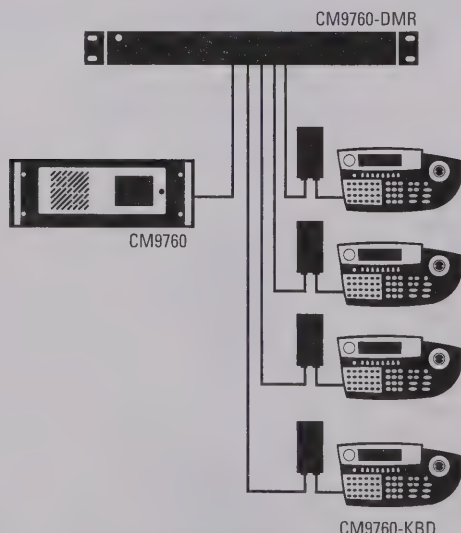


CM9760-DMR  
CAMERA CONTROL EXPANDER CONFIGURATION



CM9760-DMR  
DATA MERGER CONFIGURATION  
(P-PROTOCOL APPLICATION)\*

\*D-PROTOCOL APPLICATION CAN MERGE CONTROL  
FROM CM6800 SWITCHERS AND DX7000 DVRs.



CM9760-DMR  
KEYBOARD EXPANDER CONFIGURATION



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# CM9760-HS Hot Switch Interface Unit

HOT STANDBY SWITCH FOR CM9770, CM9760, AND CM9740

## Product Features

- Continuous Monitoring of Active and Standby CPUs
- Automatic or Manual Switching to Standby CPU in the Event of a Failure
- Diagnostic LEDs Show CPU Status
- Audible Alert in Case of CPU Failure
- Manual Control of Diagnostic Monitor and Keyboard Allows for Servicing/Programming of Either CPU Without Interrupting System Operation
- Automatically Routes Data Lines for Keyboards, Bays, and Accessories to Standby CPU
- Backward Compatible With Older Matrix Systems
- Fits a 19-Inch Standard Rack



MATRIX SWITCHERS  
CM9760-HS

The **CM9760-HS** hot switch interface unit is a computer changeover switch that monitors the status of an active CC1 in a 9740/9760/9770 system. If the active CC1 fails to operate, the HS will receive an alarm and transfer control to a standby CC1. All devices controlled by the active CC1 will then be controlled by the standby CC1. Also, all common computer input/output devices (keyboard, monitor, printer and two serial ports) will be switched from active to standby on a failure or by command of the system user.

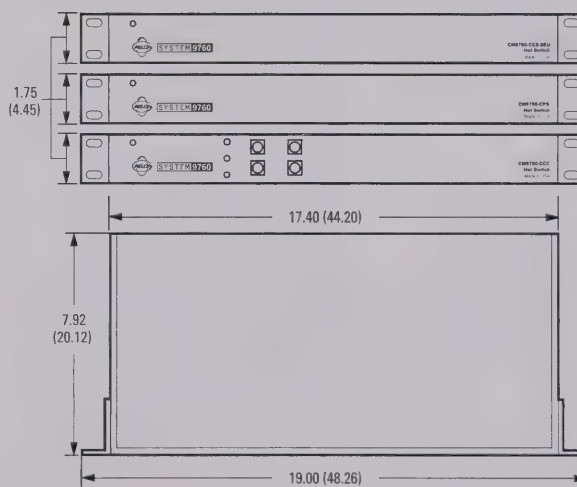
The hot switch is made up of three subunits: the CCC (computer changeover control), the CPS (computer peripheral switch), and the SEU (serial expansion unit).

The CCC is the main component of the hot switch. The data connections between the interfaced CC1s and the hot switch are located on the rear of this unit.

The CPS switches computer peripherals so that two CC1s may use only one monitor, printer, keyboard, and standard serial port.

The SEU switches the data communications ports. Each SEU can switch 16 standard RS-422/RS-485 ports.

The **CM9760-HS** allows for easy expansion to 128 ports.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2578

MANUAL: Not Available through DataFAX

C578 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

CM9760-HS	Hot switch interface unit, consisting of one CM9760-CCC, one CM9760-CPS, and one CM9760-SEU
CM9760-SEU	Serial expansion unit; supports switching of an additional 16 data ports.

## ELECTRICAL

CM9760-CCC	
Input Voltage	120-240 VAC, 50/60 Hz (auto-ranging, European-standard plug supplied)
Power	30 VA
Fusing	2A, fast acting
Power Indicator	LED, green
CM9760-CPS	
Power Indicator	LED, green
CM9760-SEU	
Power Indicator	LED, green

## PORTS

CM9760-CCC	
Input (data)	Two RS-422, RJ-45 connectors (female) DIP switch selectable baud rate and communication type Two RS-232, DB9 connectors (female) DIP switch selectable baud rate and communication type
Common Bus	Two (one IN, one OUT), DB37 connectors (female)
Logging Printer	One DB25 (female)
CM9760-CPS	
Common Bus	Two (one IN, one OUT), DB37 connectors (female)
Input (Side A)	One mini-DIN, 5-pin connector One DB9, COM 2 connector (male) One DB15, VGA connector (female) One DB25 printer connector (female)
Input (Side B)	Same configuration as Side A, input
Output	Same configuration as Side A, input
CM9760-SEU	
Common Bus	Two (one IN, one OUT), DB37 connectors (female)
Input (Side A)	Sixteen, RJ-45 (female) connectors
Input (Side B)	Same as Side A configuration
Output	Same as Side A configuration

## MECHANICAL

Connectors	
CM9760-CCC	
Power	3-wire, 18 AWG
RJ-45	Two (female)
DB9	Two (female)
DB25	Two (one male, capped, not used), (one female)
DB37	Two (female)
CM9760-CPS	
Mini-DIN, 5-pins	Three (female)
DB9	Three (male)
DB15	Three (female)
DB25	Six (three male and three female)
DB37	Two (female)
CM9760-SEU	
RJ-45	48 (female)
DB37	Two (female)

## GENERAL

Operating Temperature	32° to 122°F (0° to 50°C)
Construction	Aluminum
Finish	Black polyester powder coat
Mounting	Fits 19-inch (48.2 cm) EIA standard rack (1 RU)
Dimensions (all units)	
Base Only	1.75" H x 17.40" W x 7.92" D (4.45 x 44.20 x 20.12 cm)
With Rack Ears	1.75" H x 19.00" W x 7.92" D (4.45 x 48.26 x 20.12 cm)
Unit Weight	
CM9760-CCC	5.8 lb (2.64 kg)
CM9760-CPS	5.3 lb (2.41 kg)
CM9760-SEU	5.2 lb (2.36 kg)
Shipping Weight	
CM9760-CCC	6 lb (2.73 kg)
CM9760-CPS	6 lb (2.73 kg)
CM9760-SEU	7 lb (3.18 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

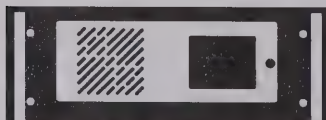
## OPTIONAL ACCESSORIES

CM9770-CC1	Backup CPU for System 9770
CM9760-CC1	Backup CPU for System 9760®
CM9740-CC1	Backup CPU for System 9740®

CC1 "A"



CC1 "B"



ALL DATA

ALL DATA

HS

CCC

CPS

SEU

DATA TO SWITCHING BAYS,  
KEYBOARDS, AND OTHER  
SYSTEM ACCESSORIES



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System 9740® is a trademark of Pelco.

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## CM9760-REL Relay Interface Unit

CONTROLS UP TO 64 RELAY CONTACT OUTPUTS PER UNIT

### Product Features

- Each Unit Provides Up to 64 Single-Pole, Single-Throw (SPST) Contact Outputs for Operating Different Peripheral Equipment
- Relay Output Contacts Can Be Configured for Normally Open (Factory Default) or Normally Closed Operation
- Memory Feature Allows Relay Groups to Retain or Hold Their Contact Position in the Event of a Power Failure or Front Panel Reset
- Multiple Units Can Be Daisy-Chained to Extend the Number of Relay Contact Outputs Controlled from a Single Port on the CC1 (Over 5,000 Relay Outputs Can Be Configured)
- The Relay Unit Can Be Remotely Placed Up to 4,000 Feet (1,219 meters) from the Controller (RS-422 Operation)

The **CM9760-REL** relay interface unit is an optional accessory for System 9700 Series matrix switchers. The unit provides dry contact switching for direct or automatic control of peripheral equipment. The unit connects to any RS-422 COM port on the rear of the CM9770-CC1, CM9760-CC1, or CM9740-CC1.

The basic function of the relay unit is to allow the user to control various peripheral equipment via relay contacts. Each relay unit processes and executes only commands with addresses that match that of the RELs (frame address). When a relay unit receives a command with an inappropriate address, it passes it on to the next unit (if applicable) via its output port.

The front of the relay interface unit has three 10-position DIP switches that configure the communication parameters for the unit as well as setting the parameters for relay contact output operation. The front also has a red data LED that flashes when the first valid command is received.

The relay unit mounts in a standard 19-inch (48.26 cm) rack and occupies only 1 RU (1.75 inches or 4.45 cm) of rack space. For remote operation, the wiring from the relay unit to the system controller should not exceed 4,000 feet.

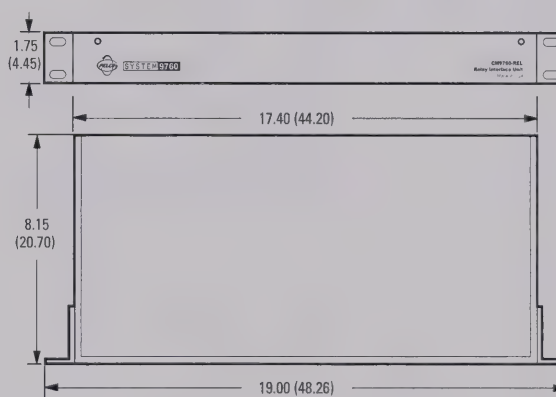
Daisy-chaining occurs when more than 64 relays are required. Each unit must be configured to have a unique frame address. Daisy-chaining configurations can be used whether relay units are situated locally, remotely, or as a combination of the two.



CM9760-REL FRONT VIEW



CM9760-REL REAR VIEW



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2538  
MANUAL: 25386

C538 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODEL

CM9760-REL Relay interface unit

## ELECTRICAL

Input Voltage	100-230 VAC, 50/60 Hz, auto-ranging
Power Consumption	30 VA (reactive consumption); 5 watts (active)
Data Ports	
Input	RS-422, RJ-45 connector DIP switch selectable baud rate
Output	RS-422, RJ-45 connector DIP switch selectable baud rate
Indicators	Two power LEDs (green) One data LED (red)
Fusing	500 mA, 250V
Relay Output	
Contact Parameters	
Max. Switching Capacity	60 watts
Max. Operating Voltage	125V AC/DC
Max. Current	2 amps
Contact Resistance	75 milliohms
Rated Load Parameters	
0.5A at 125 VAC	
2A at 30 VDC	

## MECHANICAL

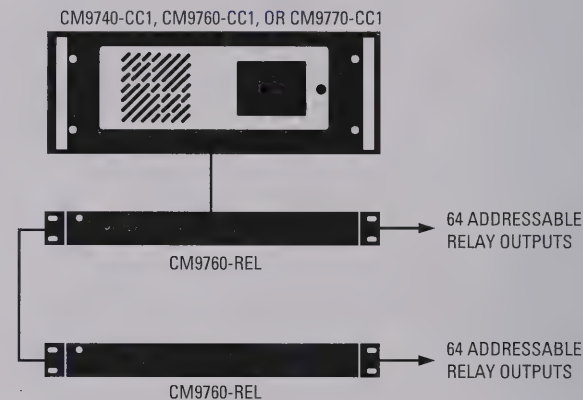
Connectors	
REL Input	Four dual-header, 32-input connectors with mating plugs
Power	3-wire, 18 AWG
RS-422	Two RJ-45 connectors
RS-232	One, DB9 connector (factory use only)
Relay Out	One, 3-pin header with mating plug

## GENERAL

Operating Temperature	32° to 122°F (0° to 50°C)
Dimensions	
Base Only	1.75" H x 17.40" W x 8.15" D (4.45 x 44.20 x 20.70 cm)
With Rack Ears	1.75" H x 19.00" W x 8.15" D (1 RU) (4.45 x 48.26 x 20.70 cm)
Mounting	Fits 19-inch EIA Standard rack
Unit Weight	8.0 lb (3.64 kg)
Shipping Weight	13 lb (5.91 kg)

## CERTIFICATIONS

- CE, Class B
- FCC, Class B



TYPICAL CONFIGURATION



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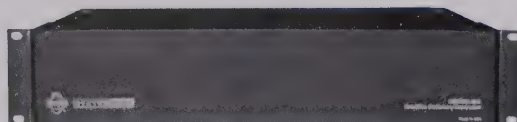


# CM9760-SAT Matrix Switcher

## CM9740/CM9760 SATELLITE VIDEO MATRIX SWITCHER, 16 X 4

### Product Features

- 16-Input Satellite Switcher
- 4 Outputs; Programmable for Local Monitoring or Remote Tie Lines
- 16 Alarm Inputs for Both Local and Remote Alarm Handling
- Economical Solution for Remote Switching
- Compatible with Both CM9740 and CM9760 Systems (Requires Version 7.80.003 Software or Later)
- On-screen Programming via Local KBD300 Keyboard or Remote CM9760-KBD Keyboard



CM9760-SAT (FRONT)



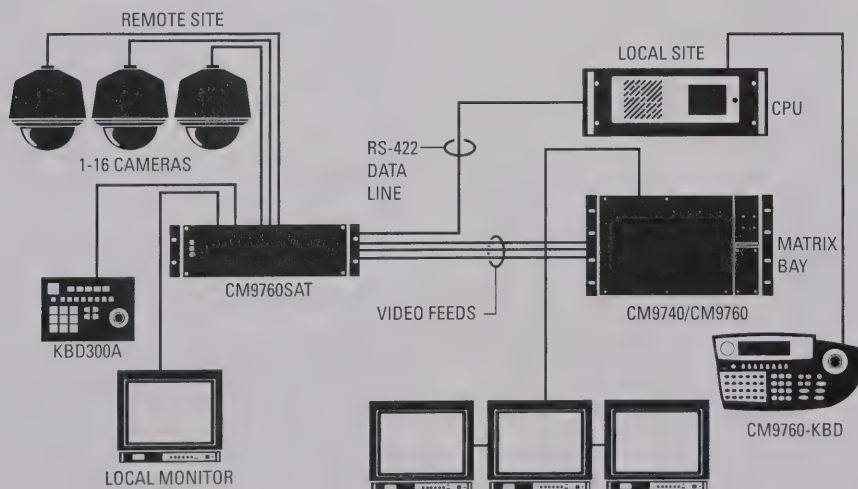
CM9760-SAT (BACK)

The **CM9760-SAT** allows you to distribute switching capability around a facility, reducing the number of coaxial cable runs to the 9740/9760 matrix and allowing local monitoring at the satellite switch locations. Up to 16 cameras can be connected to one **CM9760-SAT**. Four outputs are provided. At least one must be used for video feed to a camera input on the CM9740/CM9760 matrix bay. The others can be used for either local monitors or additional video feeds. This allows 16 cameras to share

- one video feed, one camera at a time, and three local monitors; or
- two video feeds, two cameras at a time, and two local monitors; or
- three video feeds, three cameras at a time, and one local monitor (see illustration below); or
- four video feeds, four cameras at a time, and no local monitor.

Cameras can be selected for viewing and controlled from either the main keyboard at the CM9740/CM9760 matrix bay or from a local keyboard at the satellite unit. In addition to camera selection and control, the satellite provides 16 alarm inputs that can transport alarms to the main control center.

The KBD200A and KBD300A keyboards can be used with the **CM9760-SAT**.



**DataFAX**  
SPEC: 21510  
MANUAL: Not Available through DataFAX

C1510 / REVISED 10-02



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

CM9760-SAT	Satellite video matrix switcher, 16 inputs by 4 outputs, NTSC
CM9760-SAT-X	Satellite video matrix switcher, 16 inputs by 4 outputs, PAL

Note: Requires 9740/9760 System Software Version 7.80.003 or later

## RELATED PRODUCTS

KBD200A	Desktop keyboard, multi-speed PTZ.
KBD300A	Desktop keyboard, variable-speed PTZ.
KBDKIT	Remote keyboard wiring kit. Required if connecting multiple keyboards to the remote keyboard port. Includes RJ-45 wall block and 120 VAC to 12 VAC transformer. (One kit required for each keyboard.)
KBDKIT-X	Same as KBDKIT except includes 230 VAC to 12 VAC transformer.

## SWITCHING

Switching Duration	Programmable; user defined between 1 and 99 seconds
Programmable Number of Steps per Sequence	Sixteen
Maximum Number of Sequences	Four

## VIDEO

Number of Inputs	Sixteen 75-ohm unbalanced terminating or looping; jumper selectable Four (maximum)
Number of Outputs	75-ohm unbalanced 1 Vp-p
Level	Panel-mount BNC
Connector Type	
Video Fail Detection Type	Vertical sync detector
Action	Switch to back-up sync generator
Connector Type	Panel-mount BNC
Bandwidth	17 Mhz
Frequency Response	Flat to 8 Mhz, $\pm 1.0$ dB to 15 Mhz
Gain	Unity ( $\pm 1$ dB)
Differential Gain	2% typical
Differential Phase	0.2 degree typical
Tilt	0.5% typical
Signal-to-Noise	-55 dB (peak-to-peak vs. RMS noise)
DC Output	Zero volts
Cross Talk	-50 dB typical at 3.58 Mhz

## CHARACTER GENERATOR

Display	White with black border
Program Menus	Raster background with white characters

## SAT COM CONNECTIONS

Connector Type	One 12-pin connector with mating plug (supplied)
Data Ports	
COM 1 (Receiver Control)	RS-422, P protocol; program selectable baud rate
COM 2 (Comm Interface)	RS-422, 9600 baud, odd parity, one stop bit

## KEYBOARD INTERFACE

Protocol	Keyboard
Number of Ports	Two
One Local	RJ-45, 8-pin modular (powered)
One Remote	6-pin header with mating plug (KBDKIT required)
Number of Independent Keyboards	Four (combined total)
Data Rate	9600 baud

## ALARM INTERFACE INPUTS

Number of Inputs	Sixteen
Connector Type	12-pin screw terminal
Sensing	Programmable, N.O./N.C.

## AUXILIARY OUTPUTS

Number of Outputs	Three
Connector Type	12-pin screw terminal
Contact Configuration	
F1	Form C, 0.5 amp at 125 VAC maximum
F2 and F3	Open collector, 32 VDC, 25 mA maximum

## POWER SUPPLY

Input Voltage	
CM9760-SAT	120 VAC, 50/60 Hz
CM9760-SAT-X	230 VAC, 50 Hz
Power Consumption	10 watts
Ambient Operating Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing

## PHYSICAL SPECIFICATIONS

Dimensions	3.5" H x 19.0" W x 10.5" D (2 RUs) (8.89 x 48.26 x 26.67 cm)
Mounting	Factory configured for EIA rack mount; rack ears can be removed for wall mount or free-standing applications.
Weight	
CM9760-SAT	10.15 lb (4.61 kg)
CM9760-SAT-X	10.06 lb (4.56 kg)
Shipping Weight	11 lb (4.99 kg)

## CERTIFICATIONS

- CE, Class B (CM9760-SAT-X)
- UL Listed (CM9760-SAT)
- UL Listed to Canadian safety standards (CM9760-SAT)
- FCC, Class A (CM9760-SAT)

Indicates change or addition.



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## CM9760-VCRC Series VCR Controller

### CONTROLS SANYO, SONY, AND PELCO VCRS

#### Product Features

- Controls up to 64 VCRs
- Expansion Via Daisy-chaining Allows 39 VCRC-Ps to Control up to 2,496 Pelco VCRs from a Single Sercom Port on the CM9740-CC1 or CM9760-CC1
- Expansion Via Daisy-chaining Allows 11 VCRCs to Control up to 704 Sony\* or Sanyo\* VCRs from a Single Sercom Port on the CM9740-CC1 or CM9760-CC1
- Operates Seven VCR Control Functions Automatically or Manually
- 100-240 VAC Auto-ranging Power Supply
- For Rack Mount Use Only; Occupies One Rack Unit (1.75 inches or 4.45 cm)

\* Sanyo SRT672 and the SRC-800. Also Sony models with resistive ladder control can be used. In addition, Sony S-link VCRs (VHS standard only) such as the SLV-775HF or the SVO-1320 are compatible.

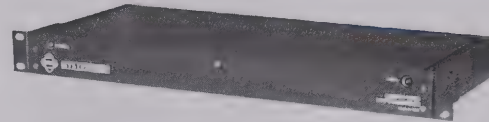
Pelco VCR controllers connect directly to the System 9740™ or System 9760® controller and give security and surveillance operators the ability to control appropriate VCR models automatically or manually from the system.

Compatible VCRs are specific to each VCR controller type. The **CM9760-VCRC** remotely controls VCRs that use either resistive ladder remote control or S-link remote control. Suitable models of Sanyo VCRs that can be controlled with the resistive ladder method are the SRT672 and the SRC-800. Also Sony models with resistive ladder control can be used. In addition, Sony S-link VCRs (VHS standard only) such as the SLV-775HF or the SVO-1320 will work with the VCRC. The **CM9760-VCRC-P** is for use with Pelco's TLR2096, TLR2168, TLR3096, and TLR3168 VCRs and employs the resistive ladder remote control method.

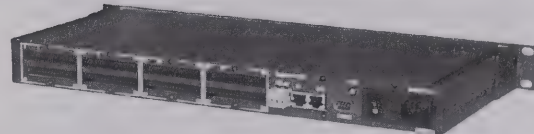
VCR hookup to the VCRC is easily done with optional control cables available from Pelco.

Configuration and setup of the VCRC is accomplished by setting DIP switches located behind the front panel of the unit.

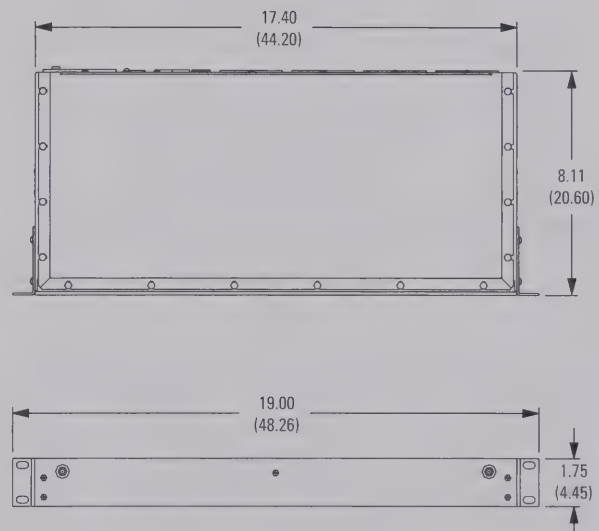
Up to 64 VCRs can be attached to and controlled by any VCR controller. The seven VR control functions (play, stop, fast forward, reverse, pause, record, and eject) can be initiated by a combination of matrix keyboard control commands and/or appropriate macro commands.



CM9760-VCRC (FRONT)



CM9760-VCRC (BACK)



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.

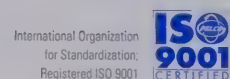


DataFAX

SPEC: 21941

MANUAL: 219416 (CM9760-VCRC), 219436 (CM9760-VCRC-P)

C1941 / REVISED 10-01



# TECHNICAL SPECIFICATIONS

## MODELS

CM9760-VCRC

VCR control unit capable of controlling 64 VCRs. VCRC only controls specific Sanyo and Sony models.

CM9760-VCRC-P

VCR control unit capable of controlling 64 Pelco VCRs. VCRC-P controls only Pelco models TLR2096, TLR2168, TLR3096, and TLR3168 VCRs.

## ELECTRICAL

Input Voltage

100-240 VAC, 50/60 Hz, auto-ranging

Power

30 VA

Data Ports

Input

RS-422, RJ-45 connector

DIP switch selectable baud rate

RS-422, RJ-45 connector

DIP switch for selecting baud rate

DB9 connector (factory use only)

500 mA, 250 V

Fusing

Relay Out

Load rating for relay contacts:

0.50A at 125 VAC or 1A at 24 VDC

## MECHANICAL

Connectors

VCRC Input

Four dual-header, 32-input connectors with mating plugs

Power

3-wire, 18 AWG

RS-422

Two RJ-45 connectors

RS-232

One DB9 connector

Relay Out

One 3-pin header with mating plug

## GENERAL

Operating Temperature

32° to 122°F (0° to 50°C)

Construction

Aluminum

Finish

Black polyester powder coat

Dimensions

1.75" H x 19.00" W x 8.11" D (1 RU)  
(4.45 x 48.26 x 20.6 cm)

Mounting

Fits 19-inch EIA Standard rack

Unit Weight

7.45 lb (3.38 kg)

Shipping Weight

12 lb (5.44 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B (CM9760-VCRC, CM9760-VCRC-P, and CM9760-VCRC-TX)
- FCC, Class B device (CM9760-VCRC and CM9760-VCRC-P)
- Meets NEMA Type 1 standards

## OPTIONAL ACCESSORIES

CM9760-VCRC-TX

VCR control cable (1/8-inch jack on one end and bare leads on other end) for connecting specific Sanyo and Sony model VCRs to the CM9760-VCRC controller, 15-foot (4.5 m) length

CM9760-VCRC-C20

Same as CM9760-VCRC-TX except 20-foot (6.1 m) length

CM9760-VCRC-C50

Same as CM9760-VCRC-TX except 50-foot (15.2 m) length

CM9760-VCRC-PTX

VCR control cable (1/8-inch jack to bare leads) for connecting Pelco model TLR2096 VCR to the CM9760-VCRC controller. 50-foot (15.2 m) length.

Indicates change or addition.



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# CM9770 Series Matrix

## MICROPROCESSOR-BASED SWITCHER/CONTROLLER, 2,048 INPUTS, 512 OUTPUTS

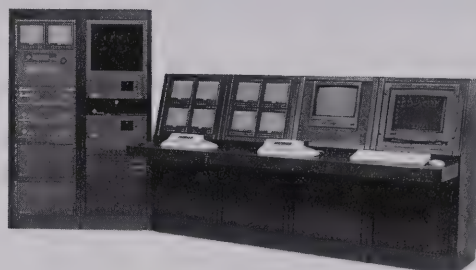
### Product Features

- Microprocessor-Based, Full Cross-Point Video Matrix
- High-Density Architecture Supports up to 32 Monitors in Each Bay
- Control up to 2,048 Cameras and 512 Monitors in a Single Node
- Virtually Unlimited Expansion Using Networked Nodes (up to 24 nodes)
- Eighteen COM Ports (Expandable to 120) Available on the CPU
- System Diagnostic LEDs displayed on Front Panel
- Flash Technology Eases System Maintenance and Upgrades
- Logical Camera Selection and Priority Level Operation
- Multiplexer and VCR Control Via Keyboard
- Built-in Video Loss Detection
- User-friendly Windows®-Based System Management Software (Windows 98, NT® 4.0, 2000, XP)
- Factory Tested Pre-Packaged Systems
- ASCII Data Input to Interface Access Control and Other External Computer-Based Systems
- Powerful Macro Programming
- Remote Viewing and Control Over TCP/IP Networks Using PelcoNet™
- Interface to DX9000 Series Digital Video Recorder (DVR)

### Optional Accessories

- "Hot Switch" and Backup CPU Ensure Uninterrupted Operation
- Redundant Power Supplies for Switching Bays
- Coaxitron® Translator Allows PTZ Communication Over Standard Coaxial Cable
- Responds to 5,000 Alarms
- Network Interface Unit Allows Multiple Systems to Share Video and Control
- Graphical User Interface (VMX200, VMX300) for Simplified Control from External PC
- DVR Management

*All CM9770 Series systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purpose of information only and does not constitute approval or certification of receiving party. Proof of certification must be provided prior to shipment of CM9770 Systems contained herein.*



MATRIX SWITCHERS,  
CM9770 SERIES

The **9770 System** is a full-featured video matrix switching control system that allows users to view and control up to 2,048 cameras and 512 monitors on a single node. Expanded monitor capacity in the matrix bay allows implementation of larger systems with a smaller footprint (less hardware) than other matrix systems.

The base configuration for the **9770 System** is made up of a central processing unit (CC1), matrix switching bay(s) (MXBs) with video input/output modules, and keyboard controllers (KBDs). Optional components can be added to enhance system capabilities.

Pre-configured, pre-packaged systems make installation fast and simple. The **9770 System** features a new, user-friendly Windows-based Management System, which allows for easy system programming and maintenance.

Powerful macro operation allows activation of commonly occurring events, either manually or automatically, based on time of day, day of week, day of year, and alarms. Macros may call system-wide sequences (tours); activate preset positions and auxiliaries on properly equipped cameras; automate VCR control; and activate external relays to turn lights on, lock doors, and control other auxiliary functions (additional equipment may be required).

The **9770 System** also includes built-in video loss detection and system diagnostic features, indicated by LEDs on the front panel of the matrix bay. Flash technology incorporated into the system design allows for easier system maintenance and upgrades.

Optional DVR/VCR management allows DVRs and VCRs to be controlled directly from the system keyboards. Suitable DVRs and VCRs can be monitored for operational conditions ensuring continuous recording. Integration with the DX9000 Series Digital Video Recorder allows the **9770 System** to monitor and respond to the recorder's video motion detection capabilities.



**DataFAX**  
**SPEC:** 21555  
**MANUAL:** Not Available through DataFAX

C1555 / PRELIMINARY 11-03

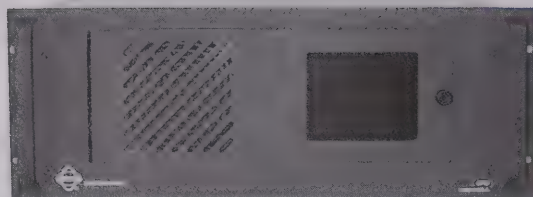
PRELIMINARY



International Organization  
for Standardization  
Registered ISO 9001







## CENTRAL PROCESSING UNIT (CC1)

The central processing unit communicates with external devices and accepts commands from external computers, keyboards, graphical user interfaces (GUIs), access control systems, casino data systems, programmable logic controllers (PLC), and lighting and intercom systems. An internal graphics accelerator card is included for displaying system diagnostics and for programming. RS-422 COM ports are provided for communication with external devices such as matrix switching bays, pan/tilt or dome receivers, and keyboards.

### ELECTRICAL

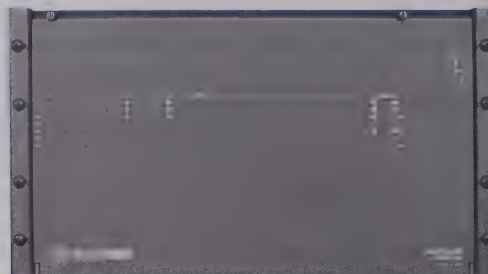
Input Voltage	120V, 60 Hz or 230V, 50 Hz, auto-ranging
Power Consumption	57 watts
Diagnostic Monitor	One VGA, one RCA (composite video, NTSC, or PAL), One S-Video
Output	Sixteen RS-422 (expandable to 32); total system capability is 120 ports.*
I/O Ports	Two RS-232 One parallel printer port One VGA output port Two TV Out ports Two PC-AT compatible keyboard ports

### GENERAL

Operating Temperature	32° to 120°F (0° to 49°C)
Dimensions	7.0" H x 19.0" W x 19.5" D (17.78 x 48.26 x 49.53 cm)
Mounting	Fits 19-inch EIA Standard rack (4 RUs)
Unit Weight	29.7 lb (13.5 kg)
Shipping Weight	43 lb (19.5 kg)

\* The CM9770-CC1 is equipped with 16 RS-422 COM ports; total capacity can be expanded to 32 ports by adding two CM9770-SER serial communication cards (8 ports each).

Total system capability can be expanded to 120 RS-422 COM ports by adding three CM9770-SER-32 port expansion units (32 ports each) to the CC1.



## MATRIX SWITCHING BAY

Each bay includes a power supply and will support modules for up to 256 camera inputs and 32 monitor outputs. Multiple bays can be used to expand a single 9770 CPU system to a maximum of 2,048 camera inputs and 512 monitor outputs. An optional backup power supply module (MPS) can be installed in each bay to provide redundancy.

### ELECTRICAL

Input Voltage	120-230V, 50/60 Hz, autoranging
Power Consumption	120 watts maximum (fully populated)
Communication	Full duplex RS-422 using an RJ-45 connector

### VIDEO

Inputs	Card slots support up to 256 inputs per bay
Outputs	Two output card slots for supporting 32 outputs per bay
Video Input Level	0.5 to 2 Vp-p, RS-170 composite video
Impedance	75 ohms terminating (looping versions available)
Crosstalk	-60 dB at 3.58 MHz
V-Synch	External connector available on rear panel

### GENERAL

Operating Temperature	32° to 122°F (0° to 50°C), non-condensing
Dimensions	10.5" H x 19.0" W x 21.7" D (26.67 x 48.26 x 55.10 cm)
Mounting	Fits 19-inch EIA Standard rack (6 RUs)
Unit Weight	40 lb (9.93 kg) 60 lb (27.22 kg), fully populated
Shipping Weight	45 lb (15.88 kg) 65 lb (33.11 kg), fully populated

# SYSTEM COMPONENTS AND ACCESSORIES

## MODELS

### CONTROLLER

CM9770-CC1

CPU controller. Operates on 120V, 60 Hz or 230V, 50 Hz. (3 RUs)

CM9770-SER

Serial communication card (RS-422 SERCOM) provides eight communications ports to interface peripheral equipment (4 maximum per CPU.)

CM9770-CC1-VID

CPU VGA card; includes outputs for composite, S-Video, and VGA display of system diagnostics and programming.

### MATRIX BAY

CM9770-MXB

Video matrix bay equipped with CM9770-MPS power supply. 120V, 60 Hz. (6 RUs).

CM9770-MXB-X

Same as CM9770-MXB except 230V, 50 Hz.

CM9770-MXBL

Video matrix bay for use with downframe looping cards (CM9770-DFL). No power required. (6 RUs)

CM9770-MPS

Matrix bay power supply (spare). 120V, 60 Hz.

CM9770-MPS-X

Matrix bay power supply (spare). 230V, 50 Hz.

CM9770-DFC

Downframe card and cable assembly; connects multiple matrix bays for expansion purposes.

CM9770-DFL

Same as CM9770-DFC except has looping inputs.

CM9770-VCC

Video camera card capable of accepting up to 32 camera inputs. Also requires a rear panel card (CM9770-DFC, CM9770-DFL, or CM9770-RPC).

CM9770-RPC

32 BNC connectors used to connect camera inputs to matrix bay.

CM9770-VMC

Video monitor card providing 16 monitor outputs; requires CM9770-RPM.

CM9770-RPM

Rear panel monitor card (BNC); provides 16 BNCs to connect monitor outputs to matrix bay; also interfaces video output signals from video output card.

## OPTIONAL COMPONENTS

The following components are compatible with the 9770 System:

### KEYBOARDS

#### CM9760 Keyboard Controller

The CM9760 keyboard controller allows the user to control the system. Desktop (KBD) and rack-mount (KBR) models are available. The keyboard includes a variable speed, vector-solving joystick with zoom control knob for pan/tilt/zoom (PTZ) and dome control. From the keyboard, the user can control GPI-activated devices, receivers, camera/monitor switching, and multiplexer screen functions, and create single/dual patterns, zones, zone labels, presets and preset recalls. The user can also arm and disarm alarms as well as implement stand-alone, direct mode operation. Twenty-four programmable soft keys can be individually labeled with installation-specific titles allowing logical camera selection based on the camera's field of view rather than camera numbers.

CM9760-KBD

Full-function desktop variable-speed keyboard. 120V, 60 Hz.

CM9760-KBD-X

Same as CM9760-KBD except 230V, 50 Hz.

CM9760-KBR

Full-function 19-inch EIA rack mount keyboard (4 RUs). 120V, 60 Hz.

CM9760-KBR-X

Same as CM9760-KBR except 230V, 50 Hz.

#### KBD200A Keyboard Controller

The KBD200A provides control of camera/monitor switching; reset, pattern, and sequence operation; local and receiver auxiliary operation; and multiplexer screen functions. The KBD200A also provides push-button control of PTZ functions. (A KBDKIT is required for power.)

KBD200A

Desktop keyboard with full switching capabilities, plus push-button control of PTZ functions. 12V or  $\pm 12$  VDC. (Requires KBDKIT for power.)

#### KBD300A Keyboard Controller

The KBD300A provides control of camera/monitor switching; preset, pattern, and sequence operation; local and receiver auxiliary operation; and multiplexer screen functions. The KBD300A also provides joystick control of PTZ functions. (A KBDKIT is required for power.)

KBD300A

Desktop keyboard with full switching capabilities, plus joystick control of PTZ functions. 12V or  $\pm 12$  VDC. (Requires KBDKIT for power.)

### NETWORK INTERFACE UNIT

The CM9770-NW1 Network Interface Unit allows multiple systems to share video and control.

CM9770-NW1

Network interface unit; network CPU and software necessary for joining two or more independent systems together. (3 RUs)

# SYSTEM COMPONENTS AND ACCESSORIES

## MISCELLANEOUS

CM9760-ALM

Alarm interface unit; connects directly to each system; each unit can monitor up to 64 alarms and up to four units can be connected in a series from one SERCOM port. (1 RU)  
Code distribution unit; 16-channel RS-422 transmit only (2 data wires and ground) distributor. Primarily used for wiring up to 16 pan/tilt/zoom receivers in a "star" configuration. (1 RU)

CM9760-CDU-T

CM9760-CXTA

Coaxitron® translator; generates Coaxitron signals for Pelco Coaxitron receivers; each translator supports up to 16 receivers. (1 RU)  
Data merger and port expander unit; this unit allows multiple CM9770-CC1 units to control multiple pan/tilt/zoom cameras and allows multiple keyboards to communicate through one CC1 port. (1 RU)

CM9760-DMR

Same as CM9760-DMR except 230V, 50 Hz.

CM9760-DMR-X  
VMX200 and  
VMX300 Series

Video management systems; graphical map/icon-based user interface for mouse driven operator control from external PC.

CM9760-HS

Hot switch interface unit; changeover unit that monitors the status of a primary CC1 in a 9770 system. (3 components, 1 RU each)

CM9760-MDA

Master distribution amplifier; inserts master time and date from the CM9770-CC1 and a programmable title of up to twenty-four characters on one to sixteen video signals. (3 RUs)

CM9760-MDA-X  
CM9760-REL

Same as CM9760-MDA except 230V, 50 Hz.  
Relay interface unit; connects directly to each system and provides dry contact switching for direct or automatic control of peripheral equipment; each unit provides up to 64 SPST contact outputs. (1 RU)

## COMPATIBLE RECEIVERS

Spectra® Series

ERD97P21-U

LRD41C21-1/-2/-3

LRD41C22-1/-2/-3

Spectra dome multiple protocol receiver.

Pelco P protocol receiver.

Legacy®, fixed speed receiver with presets.

Same as LRD41C21 Series except variable speed receiver.

Esprit®

Integrated pan/tilt positioning receiver.

Coaxitron

Coaxitron translator allows Coaxitron control of PTZ cameras.

RU = Rack Unit. One RU is equivalent to 1.75 inches (4.45 cm) of vertical space. Identifies number of rack units required to mount component in a 19-inch EIA Standard rack mount.



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# VMX200-SYS Video Management System

## FULLY-EQUIPPED WORKSTATIONS

### Product Features

- Operator Uses Visual Interface to Control Switchers, Multiplexers, and Other Devices
- Simple and Intuitive
- Drag and Drop Camera Selection from Maps to Display Monitors
- No More Camera and Monitor Keyboard Codes to Remember!
- On-screen Mouse Controlled PTZ Functions
- Import Maps Directly From Graphic Programs
- Link Hierarchical Sets of Maps (i.e., buildings-floors-rooms)
- Automatically Configures Data Ports and Video Buses
- Simplifies Equipment Integration
- Simplifies System Growth and Modifications
- Easily Define, Save and Use Presets, Sequences, and Macros
- Alarm Response Automatically Activates Presets, Sequences, and Macros
- Image Capture Manual or Automatic

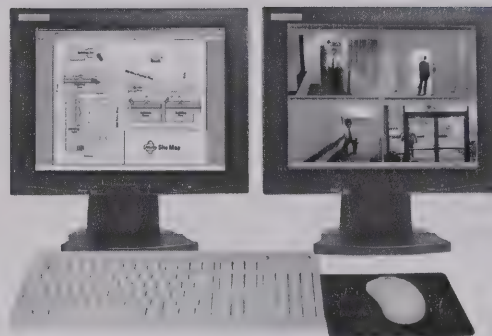
The Pelco **VMX200-SYS** video management system brings a new dimension of user interface and control to video security. The **VMX200-SYS** uses simple mapping configuration and a visual interface to perform all switch and camera control functions, simplifying and speeding response to security events.

The **VMX200-SYS** comes completely loaded with software and video capture card on a dedicated workstation. A background map showing camera positions is overlaid with a display window showing the camera video.

An optional dual monitor feature with quad video card allows you to view the map on one monitor while displaying the video from four cameras on the other. With the two monitors mounted next to each other, an operator has full vision and control of a surveillance area.

The Pelco **VMX200-SYS** is easy to use. To select any camera on the map, the operator simply drags the camera icon to the display window or across to the display monitor and drops it where he wishes to see it.

The mouse controls all camera functions. To move a positionable camera, simply move the mouse pointer to the video display and depress the left button. The camera position will follow the direction of a cross-hair that appears in the window. Rotate the mouse wheel to zoom in or out.



**MODEL VMX200-SYS-Q**  
**DUAL MONITOR SYSTEM WITH QUAD DISPLAY**

In addition to camera selection and operation, the **VMX200-SYS** allows you to program and operate presets, sequences, and macros. You can also switch cameras to other monitors in the system, control VCRs, program camera features, respond to alarms, and operate camera auxiliary relay contacts.

Every **VMX200-SYS** model features an image capture function. Manually commanded, this function stores the chosen image on the hard drive for later recall or forwarding to other viewers. Image capture can also be initiated by an alarm, in a sequence, or by timer control.

The **VMX200-SYS** workstation utilizes an interactive system schematic to simplify system configuration. This unique technique automatically configures ports and buses while providing a schematic representation of the overall system.

*All VMX200 systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purposes of information only and does not constitute approval or certification of the receiving party. Proof of certification must be provided prior to shipment of VMX200 systems contained herein.*



DataFAX

SPEC 21525

MANUAL: Not Available through DataFAX

C1525 / REVISED 12-03



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

### Workstations:

All VMX200 workstations include video management software, an industrial rack mount PC, keyboard and mouse. (Monitors not supplied. Any VGA or Super VGA monitor can be used.)



VMX200-SYS Single Monitor System



VMX200-SYS-1 Dual Monitor System



VMX200-SYS-Q Dual Monitor System with Quad Display

## COMPATIBLE PRODUCTS

### Switchers

CM6700, CM6800, CM9740, CM9760, CM9770

### Multiplexers VCRs

Genex® Series MX4004, MX4009, MX4016  
TLR3096, TLR3168

## ELECTRICAL/VIDEO

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Signal System	NTSC/PAL
Video Outputs	
Single Monitor Systems	1, SVGA
Dual Monitor Systems	2, SVGA

## MECHANICAL

Connectors	
Video Inputs	BNC
PS/2 Mouse and Keyboard	6-pin MiniDIN
SVGA Monitor Port	15-pin D-type
Printer Port	25-pin D-type
10/100 TCP/IP Port	RJ-45
COM 1 and 2	9-pin D-type

## GENERAL

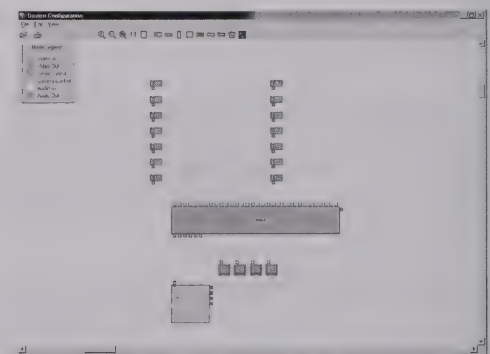
Operating Temperature	41° to 104°F (5° to 40°C)
Relative Humidity	Maximum 80%, non-condensing
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (17.78 x 48.26 x 49.78 cm)
Unit Weight	27 lb (12.25 kg)
Shipping Weight	55 lb (24.9 kg) maximum

## CERTIFICATIONS

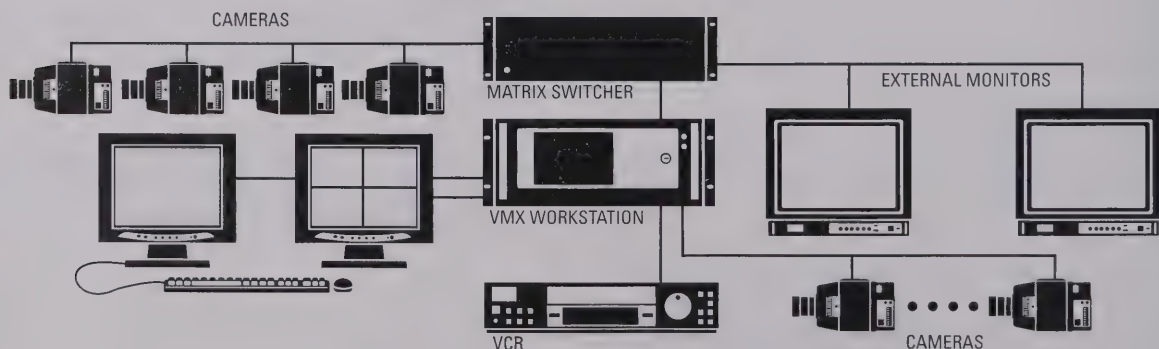
- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B



**DRAW AND DROP CAMERA SELECTION FROM MAPS TO DISPLAY MONITORS**



**INTERACTIVE SYSTEM SCHEMATIC**



Indicates change or addition.



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## VMX300 Video Management System

### VIEWING AND CONTROL FOR UP TO 100 CAMERAS

#### Product Features

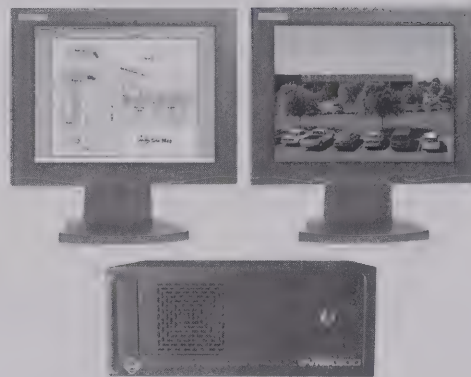
- Bridges the Analog/Digital Video Gap by Enabling Both Analog and Digital Products to Operate as a Single Integrated System
- Simple, Powerful and Intuitive User Interface. Can Control Switchers, DVRs, PelcoNet™ Transmission Systems, and the NVR300 Network Video Recorder
- Provides Real-World Integration of IP-Based Video Into Existing Technology
- Flexible Client/Server Architecture Allows Multiple Users to Share Common Resources
- Drag and Drop Cameras to Display Windows from System Maps
- Eliminates the Need to Remember Complex Camera and Keyboard Codes. Operators Get Up-to-Speed Faster
- Control Dome and PTZ Functions with a Mouse
- Import Maps of Facilities from JPEG, BMP or WMF Files
- Create Logical Links Between Related Maps of Building Floors, Rooms, and Hallways with Expanded Views and Details
- Leverages Existing CCTV Systems While Providing a Pathway for IP-Based Video Integration and System Growth

The **VMX300** provides control and monitoring of CCTV equipment in a client-to-server configuration. **VMX300** can control up to 100 cameras with point-and-click simplicity.

**VMX300** can be installed in a variety of display configurations. IP video decoding allows clients to display live video in multiple display windows. These windows can consist of multiple digital video windows and up to four analog video windows.

Facility maps are used to identify the location of cameras, domes, and PTZ devices. Control of these devices occurs directly from the user interface. Operators now have an immediate reference to where things are happening. Better decisions can be made and appropriate actions taken.

**VMX300** seamlessly integrates cameras, monitors, switchers, DVRs, PelcoNet transmission systems, and the NVR300. New device drivers can be added to **VMX300** as they become available, without requiring changes to the client/server applications.



MATRIX SWITCHERS  
VMX300

The **VMX300** system comes pre-loaded with both client and server software, and device drivers (see list of compatible products, next page). Facility maps are provided and installed by the system administrator.

An optional configuration with a quad display allows the operator to view four analog video signals along with other digital video signals on the same monitor. With two monitors located next to each other, an operator has a comprehensive view of the area(s) under surveillance as well as control of the devices within the associated views.

In addition to camera selection and control, the **VMX300** allows you to switch cameras to other monitors in the system, control DVRs and NVRs, program camera features, respond to alarms, and play back recorded video from DVRs and NVRs.

*All VMX300 systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purposes of information only and does not constitute approval or certification of the receiving party. Proof of certification must be provided prior to shipment of VMX300 systems contained herein.*



**DataFAX**  
SPEC: 21552  
MANUAL: Not Available through DataFAX

C1552 / PRELIMINARY 12-03

**PRELIMINARY**



REQUIRED

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## MODELS

All VMX300 workstations come with software pre-loaded on a rack-mountable PC; keyboard and mouse are included. Each workstation supports two monitors. (Note: Monitors are not included. A standard VGA or Super VGA monitor can be used.)

## CLIENT/SERVER WORKSTATIONS

VMX300-CSVR workstations include both client and sever software applications. The model comes standard with licensing for the server and client and up to 10 cameras. Licenses for up to 100 cameras can be purchased.

VMX300-CSVR-0	Supports digital video windows only
VMX300-CSVR-1	Supports one analog video input/window*, which can be displayed along with digital video signals on the same monitor
VMX300-CSVR-4	Supports four analog video inputs/windows*, which can be displayed along with digital video signals on the same monitor

## CLIENT WORKSTATIONS

VMX300-CL workstations include the client software application and the licensing required (five) for the client workstation to connect to the server. Up to 10 additional client workstations can be connected to the VMX300 server. Each client added decreases the number of cameras (by five) that you can add.

VMX300-CL-0	Supports digital video windows only
VMX300-CL-1	Supports one analog video input/window*, which can be displayed along with digital video signals on the same monitor
VMX300-CL-4	Supports four analog video inputs/windows*, which can be displayed along with digital video signals on the same monitor

\*Note: The analog video input/window described in the -1 and -4 models typically refers to direct connection of a camera, matrix switcher, or other analog video source, directly to the VMX300 rear panel. -0 models can receive analog video inputs only through PelcoNet video encoders.

## VMX300 SOFTWARE LICENSES

The VMX300 can support a maximum of 100 licenses. Licenses can be used for cameras (one each) and clients (five each; supplied with client workstation).

VMX300-LIC-10	10 additional licenses
VMX300-LIC-20	20 additional licenses
VMX300-LIC-50	50 additional licenses
VMX300-LIC-100	100 additional licenses

## COMPATIBLE PRODUCTS

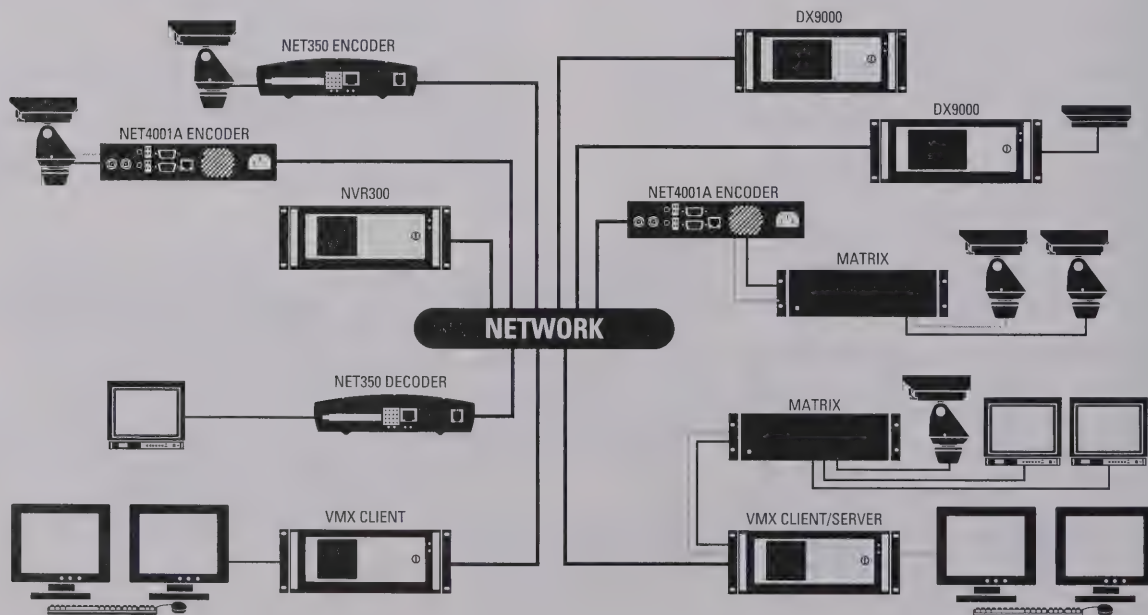
Switchers	CM6700, CM6800, CM9740, CM9760, CM9770
PelcoNet Transmission Systems	NET300 Series, NET4001A
Network Video Recorders	NVR300 Series
Digital Video Recorders	DX9000 Series

## ELECTRICAL/VIDEO

Input Voltage	100-240 V, 50/60 Hz, auto-ranging
Signal System	NTSC/PAL
Video Outputs	2 SVGA
Connectors	PS/2 Mouse and Keyboard
	SVGA Monitor Port
	Printer Port
	COM 1 and 2
	Modem
	Ethernet (10/100BaseT)
	USB
	6-pin mini-DIN
	15-pin D-type
	25-pin D-type
	9-pin D-type
	Two RJ-11 ports
	RJ-45
	Two

## GENERAL

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight	33 lb (15.0 kg)
Shipping Weight	51 lb (23.1 kg)



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# VMX300-E Enterprise Video Management System

## VIEWING AND CONTROL FOR UP TO 2,000 CAMERAS

### Product Features

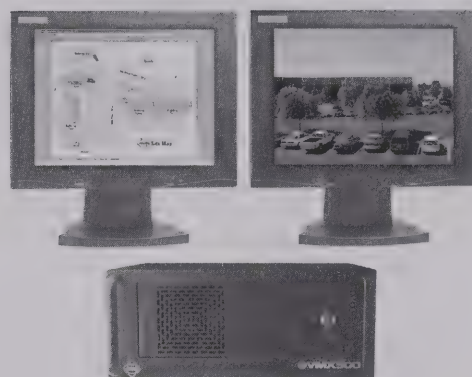
- Bridges the Analog/Digital Video Gap by Enabling Both Analog and Digital Products to Operate as a Single Integrated System
- Simple, Powerful and Intuitive User Interface. Can Control Switchers, DVRs, PelcoNet™ Transmission Systems, and the NVR300 Network Video Recorder
- Provides Real-World Integration of IP-Based Video Into Existing Technology
- Flexible Client/Server Architecture Allows Multiple Users to Share Common Resources
- Drag and Drop Cameras to Display Windows from System Maps
- Eliminates the Need to Remember Complex Camera and Keyboard Codes. Operators Get Up-to-Speed Faster
- Control Dome and PTZ Functions with a Mouse
- Import Maps of Facilities from JPEG, BMP or WMF Files
- Create Logical Links Between Related Maps of Building Floors, Rooms, and Hallways with Expanded Views and Details
- Leverages Existing CCTV Systems While Providing a Pathway for IP-Based Video Integration and System Growth

The **VMX300-E** provides control and monitoring of CCTV equipment in the following configurations: client-to-server; client-to-multiple servers; or server-to-server. VMX300-E can control up to 2,000 cameras with point-and-click simplicity.

**VMX300-E** can be installed in a variety of display configurations. IP video decoding allows clients to display live video in multiple display windows. These windows can consist of multiple digital video windows and up to four analog video windows (depending on the **VMX300-E** model selected—see next page).

Facility maps are used to identify the location of cameras; domes, and PTZ devices. Control of these devices occurs directly from the user interface. Operators now have an immediate reference to where things are happening. Better decisions can be made and appropriate actions taken.

**VMX300-E** seamlessly integrates cameras, monitors, switchers, DVRs, PelcoNet transmission systems, and the NVR300. New device drivers can be added to **VMX300-E** as they become available, without requiring changes to the client/server applications.



MATRIX SWITCHERS  
VMX300-E

The **VMX300-E** system comes pre-loaded with software and device drivers (see list of compatible products, next page). Facility maps are provided and installed by the system administrator.

An optional configuration with a quad display allows the operator to view four analog video signals along with other digital video signals on the same monitor. With two monitors located next to each other, an operator has a comprehensive view of the area(s) under surveillance as well as control of the devices within the associated views.

In addition to camera selection and control, the **VMX300-E** allows you to switch cameras to other monitors in the system, control DVRs and NVRs, program camera features, respond to alarms, and play back recorded video from DVRs and NVRs.

*All VMX300-E systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purposes of information only and does not constitute approval or certification of the receiving party. Proof of certification must be provided prior to shipment of VMX300-E systems contained herein.*



DataFAX

SPEC: 21553

MANUAL: Not Available through DataFAX

C1553 / PRELIMINARY 12-03

PRELIMINARY



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for Standardization  
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## MODELS

VMX300-E workstations come with software pre-loaded on a rack mount PC; keyboard and mouse are included. Each workstation supports two monitors. (Note: Monitors are not included. A standard VGA or Super VGA monitor can be used.)

## CLIENT/SERVER WORKSTATIONS

VMX300-E-CSVR workstations include both client and server software applications. The model comes standard with licensing for the server and client and up to 10 cameras. Licenses for up to 2,000 cameras can be purchased.

VMX300-E-CSVR-0	Supports digital video windows only
VMX300-E-CSVR-1	Supports one analog video input/window*, which can be displayed along with digital video signals on the same monitor
VMX300-E-CSVR-4	Supports four analog video inputs/windows*, which can be displayed along with digital video signals on the same monitor

## CLIENT WORKSTATIONS

VMX300-E-CL workstations include the client software application and the licensing required (10) for the client workstation to connect to the server. Up to 50 additional client workstations can be connected to the VMX300-E server. Each client added decreases the number of cameras (by 10) that you can add.

VMX300-E-CL-0	Supports digital video windows only
VMX300-E-CL-1	Supports one analog video input/window*, which can be displayed along with digital video signals on the same monitor
VMX300-E-CL-4	Supports four analog video inputs/windows*, which can be displayed along with digital video signals on the same monitor

\*Note: The analog video input/window described in the -1 and -4 models typically refers to direct connection of a camera, matrix switcher, or other analog video source, directly to the VMX300 rear panel. -0 models can receive analog video inputs only through PelcoNet video encoders.

## VMX300-E SOFTWARE LICENSES

The VMX300-E can support a maximum of 2,000 licenses. Licenses can be used for cameras (one each) and clients (10 each; supplied with client workstation).

VMX300-E-LIC10	10 additional licenses
VMX300-E-LIC20	20 additional licenses
VMX300-E-LIC50	50 additional licenses
VMX300-E-LIC100	100 additional licenses
VMX300-E-LIC200	200 additional licenses
VMX300-E-LIC500	500 additional licenses

## COMPATIBLE PRODUCTS

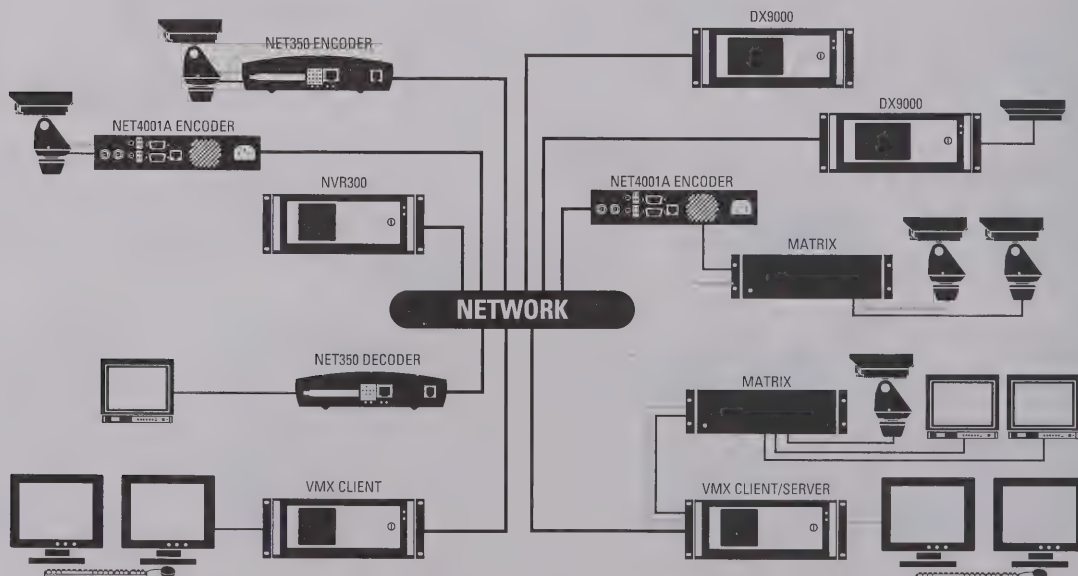
Switchers	CM6700, CM6800, CM9740, CM9760, CM9770
PelcoNet Transmission Systems	NET300 Series, NET4001A
Network Video Recorders	NVR300 Series
Digital Video Recorders	DX9000 Series

## ELECTRICAL/VIDEO

Input Voltage	100-240 V, 50/60 Hz, auto-ranging
Signal System	NTSC/PAL
Video Outputs	2 SVGA
Connectors	
PS/2 Mouse and Keyboard	6-pin mini-DIN
SVGA Monitor Port	15-pin D-type
Printer Port	25-pin D-type
COM 1 and 2	9-pin D-type
Modem	Two RJ-11 ports
Ethernet (10/100BaseT)	RJ-45
USB	Two

## GENERAL

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight	33 lb (15.0 kg)
Shipping Weight	51 lb (23.1 kg)



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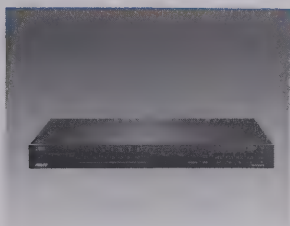
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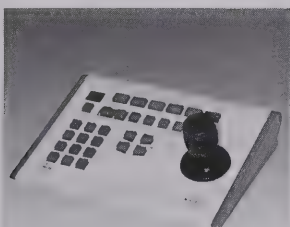


## MULTIPLEXERS AND QUADS

**Simultaneously View 4, 9 or 16 Cameras**

### Multiplexers

Pelco's Genex® Series multiplexers use the latest digital video processing technology, producing high-quality recordings and outstanding, multi-camera displays. Available in monochrome and color models, Genex multiplexers can simultaneously view and record up to 4, 9, or 16 cameras depending on model selected. The Genex Series multiplexer can be controlled by a KBD4000 Series keyboard or connected to a MX4000SVR multiplexer server for display on a single monitor.

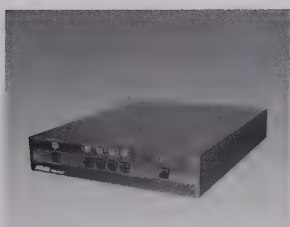


### Quad

Pelco's quad is a high quality, low cost video processor capable of displaying full-screen or quad views of four camera inputs. The QD104 Series quad has sequencing capability and features alarm inputs.

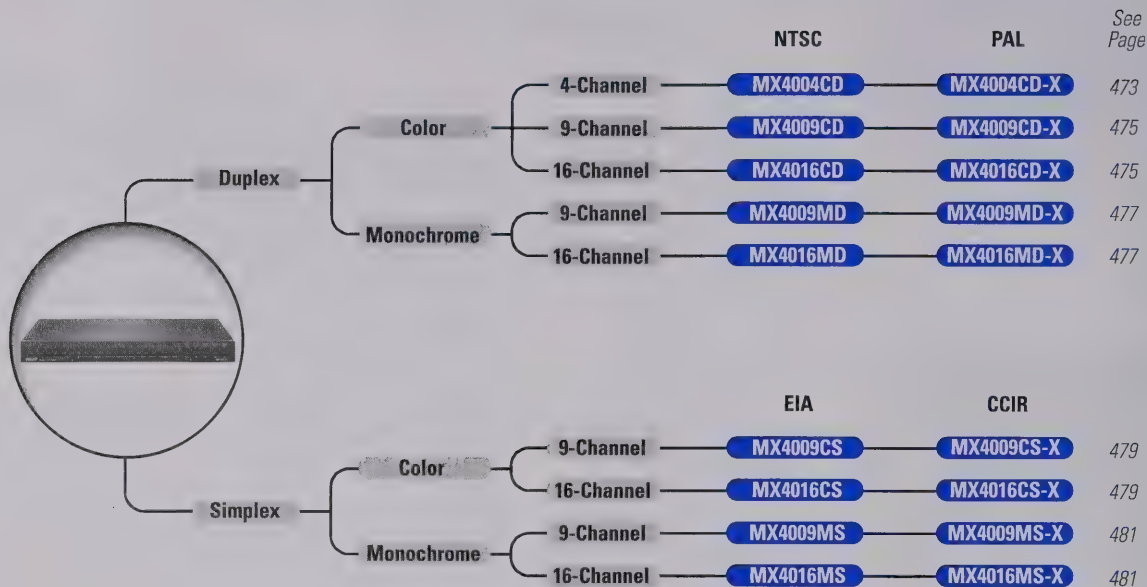
Immediately following this page you will find the product selection guides listed below to assist you in selecting Pelco products. Refer to these guides for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

- Multiplexer Selection Guide
- Quad Selection Guide

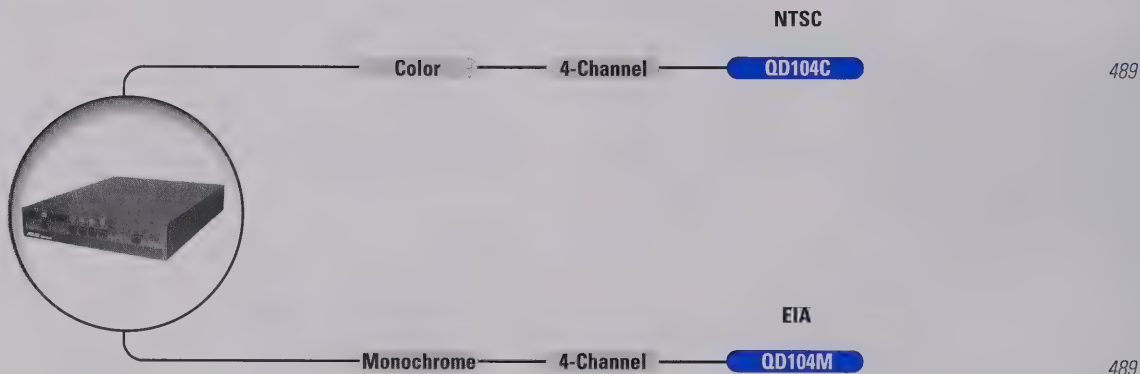


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## Genex® Series Multiplexers



## QD104 Series Quad



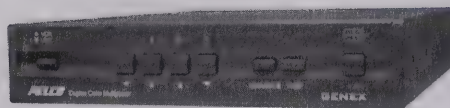


## Genex<sup>®</sup> Series MX4004CD Multiplexer

COLOR, DUPLEX, 4 VIDEO INPUTS

### Product Features

- Full-Duplex Operation
- "Covert" Feature Lets Selected Cameras Be Recorded But Not Displayed During Live Viewing or Playback
- Simultaneous Viewing of Up to Four Cameras While Recording or Playing Tapes
- Advanced Digital Video Processing Provides High Quality Multi-Camera and Full-Screen Displays
- Looping Inputs
- Four-Camera (Quad) Display
- Playback of Other Manufacturers' Tapes\* (see note on back)
- Menu Programming for Quick, Easy Setup
- Multi-Language Support: English (Default), French, German, or Spanish
- On-Screen Alphanumeric Display – 12-Character Camera Titles, Time, Date, and Alarm
- Two Independent Monitor Outputs
  - Main Monitor Output – Full-Screen Call-Up, Multi-Camera Displays, VCR Playback, and Sequencing
  - Spot Monitor Output – Full-Screen Call-Up, Sequencing Activity, and Alarms
- Alarm Handling – Priority or Exclusive Alarm Recording and Display
- Compatible with SVHS VCRs and Monitors (Main Output)
- Remote Control via RS-485 Communication Port
- Pan, Tilt, and Lens Control via Coaxitron<sup>®</sup> \*\* (see note on back)
- Optional Rack Mount Available



The Genex<sup>®</sup> **MX4004CD** high performance, color duplex multiplexer uses the latest digital video processing technology, providing high-quality recordings and outstanding multi-camera display.

The Genex **MX4004CD** can multiplex up to four cameras for recording on a single VCR. These duplex multiplexers let you view video from single or multiple cameras while recording or playing tapes using regular or time-lapse VCRs. \*\*\* (see note on back)

The Genex **MX4004CD** lets live or recorded cameras be displayed full-screen or combined with others in a quad display. Cameras can also be displayed sequentially in either full-screen or multi-camera display.

A spot monitor output can be used to display full-screen cameras manually, sequentially, or as a result of alarms.

The Genex **MX4004CD** is easy to use; offers intuitive push-button controls for operation; and has password-protected, on-screen menus for easy system setup.

An optional rack kit (RK100) is available for mounting one or two units in a standard 19-inch EIA rack or console.

MULTIPLEXER  
COLOR, DUPLEX



DataFAX  
SPEC: 21995  
MANUAL: Not Available through DataFAX

C1995 / REVISED 10-03



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# TECHNICAL SPECIFICATIONS

## MODELS

MX4004CD	4-channel, color duplex multiplexer, NTSC, 12 VDC ( $\pm 10\%$ )
MX4004CD-X	4-channel, color duplex multiplexer, PAL, 12 VDC ( $\pm 10\%$ )

## VIDEO

Input Level	1 Vp-p, composite
Video Standard	
NTSC	525 lines, 60 fields/second
PAL	625 lines, 50 fields/second
Digital Image	720 (H) x 480 (V) pixels full screen 1,440 bytes horizontal memory 12 MB display image memory 8-bit luminance, 256 shades of gray 8-bit chrominance, over 16 million colors CCIR 601 4:2:2
Format	13.5 MHz
Sampling Rate	Less than 1 percent, all modes
Geometric Error	
Analog Processing	20 MHz
Bandwidth	Less than 2 percent
Differential Phase	Less than 2 percent
Differential Gain	Bit mapped
Character Generator	White with black border
Display	Raster background with white characters
Program Menus	

## ELECTRICAL

Operating Voltage	12 VDC ( $\pm 10\%$ )
Power	Less than 10 watts
Video Inputs	Four, BNC, looping with rear DIP switch selectable termination, 75 ohms or Hi-Z
Monitor Outputs	Two
Main	BNC, 75 ohms 4-pin mini-DIN, Y/C output (SVHS)
Spot	BNC, 75 ohms
VCR Inputs	One
VCR In	BNC, composite, 75 ohms 4-pin mini-DIN, Y/C input (SVHS)
VCR Outputs	One
VCR Out	BNC, composite, 75 ohms 4-pin mini-DIN, Y/C output (SVHS)
Alarm Inputs	4 individually programmable for N.O. or N.C.
Alarm Outputs	One

## GENERAL

Operating Temperature	32° to 122°F (0° to 50°C)
Relative Humidity	90%, non-condensing
Construction	Aluminum
Finish	Black
Dimensions	1.7" H x 8.4" W x 12.2" D (4.3 x 21.3 x 31.0 cm)
Unit Weight	4 lb (1.8 kg)
Shipping Weight	5 lb (2.26 kg)

## CERTIFICATIONS/PATENTS

- CE
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- U.S. Patent pending

## OPTIONAL ACCESSORIES

KBD4000**	Full-function keyboard controller; joystick control of pan and tilt functions. Use with Genex multiplexer and server.
KBD4002**	Same as KBD4000 except keyboard control of pan and tilt functions.
MX4000SVR	Multiplexer server, 120 VAC, 60 Hz, for use with NTSC and RS-170 format multiplexers. Provides centralized control of up to 8 multiplexers by one or more operators.
MX4000SVR-X	Same as MX4000SVR except 230 VAC, 50 Hz, for use with PAL and CCIR format multiplexers.
RK100	Rack mount kit (1 RU) for mounting one or two MX4004 Series Multiplexers in a standard 19-inch rack. Blank filler panel provided.

\* Pelco Genex multiplexers can normally decode tapes made with other manufacturers' multiplexers. However, Dedicated Micros models DM/SPG4/S/N/090 and DM/SPC4/D/N/6M must be properly programmed to create tapes that are compatible with Genex multiplexers. Tapes made with DM model SPR2AS/C/M/M are incompatible. (Refer to Tech Tip 00-3038 for details.)

\*\*When used with 15-bit standard Coaxitron receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt, and lens functions and auxiliary on/off. It does not set or call presets, or support preset scan. When used with 32-bit extended Coaxitron receivers (such as Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4000 supports all the above functions, including setting and calling presets and patterns. It does not support programming of preset or pattern labels. If labels for presets or patterns are required, they need to be programmed with a different control, such as the MPT9500.

\*\*\*MX4004 multiplexers do not record and play back simultaneously.



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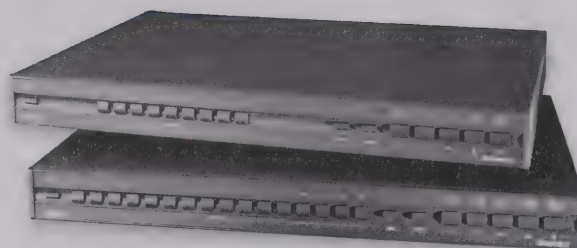
Indicates change or addition.

## Genex® Series Multiplexer

### COLOR, DUPLEX, 9/16 VIDEO INPUTS

#### Product Features

- Full Duplex Operation
- "Covert" Feature Allows Selected Cameras to be Recorded, but not Displayed During Live Viewing or Playback. Viewing or Playback of "Covert" Cameras can be Password Protected
- Simultaneous Viewing of Up to 16 Cameras While Recording or Playing Tapes
- Advanced Digital Video Processing, Including Advanced Image Re-sizing and Digital Filtering. Provides High Quality Multi-Camera and Zoom Displays
- Looping Inputs
- Multi-Camera Display Modes – PIP (2), Quad (4), Nine (9), and Sixteen (16) Camera Displays
- Advanced Activity Detection – Programmable Detection Mask and Sensitivity Levels for Each Camera
- Four VCR Compatibility Modes – Standard, Auto Tracking, VCR Matching, and Custom
- Playback of Other Manufacturers' Tapes\* (see note on back)
- Menu Programming for Quick, Easy Setup
- Multi-language Support; English (Default), French, Spanish, or German
- On-Screen Alphanumeric Display – 12-Character Camera Titles, Time, Date, and Alarm
- Three Independent Monitor Outputs
  - Main Output – Full-Screen Call-up, Multi-Camera Displays, VCR Playback and Sequencing
  - Spot Monitor Output – Full-Screen Sequencing, Activity, and Alarms
  - Auxiliary Monitor Output – Full-Screen Sequencing, Activity, and Alarms
- Alarm Handling – Priority or Exclusive Alarm Recording and Display
- Compatible with S-VHS VCRs and Monitors (Main Output)
- Remote Control via RS-485 Communications Port
- Pan/Tilt and Lens Control via Coaxitron® \*\* (see note on back)



MX4009CD (TOP), MX4016CD (BOTTOM)

The **Genex**® high performance, color duplex multiplexer utilizes the latest in digital video processing technology, providing high-quality recordings and outstanding multi-camera displays.

Available in 9- or 16-channel versions, **Genex** can multiplex up to 9 or 16 cameras for recording on a single VCR. During recording and playback any camera may be viewed independently or combined in a multi-camera display.

Unlike most multiplexers, **Genex** contains a powerful re-sizing engine that uses patented Active Image™ technology to provide broadcast-quality, image re-sizing for both multi-camera and zoom displays. This technology allows Genex to provide higher quality images with less aliasing.

**Genex** allows live or recorded cameras to be displayed full-screen or combined with others in a picture-in-picture, quad, nine, or sixteen camera display. Cameras may also be displayed sequentially in either full-screen or multi-camera format. An adjustable zoom mode provides full control of digital magnification of any camera for closer examination.

An advanced activity detector can prioritize cameras for faster recording and display independent of record or playback speeds. Two additional monitor outputs (spot and auxiliary) can be used to display full-screen cameras manually, sequentially, or as a result of alarms and activity detection.

**Genex** is easy to use; offers intuitive push-button controls for operation; and has password-protected, on-screen menus for easy system setup.



**DataFAX**  
SPEC: 21920  
MANUAL: Not Available through DataFAX

C1920 / REVISED 4-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MX4009CD	9-channel, color duplex multiplexer, NTSC, 120 VAC, 60 Hz
MX4009CD-X	9-channel, color duplex multiplexer, PAL, 230 VAC, 50 Hz
MX4016CD	16-channel, color duplex multiplexer, NTSC, 120 VAC, 60 Hz
MX4016CD-X	16-channel, color duplex multiplexer, PAL, 230 VAC, 50 Hz

## VIDEO

Input Level	1 Vp-p, composite
Video Standard	
NTSC	525 lines, 60 fields/second
PAL	625 lines, 50 fields/second
Digital Image	768 (H) x 512 (V) pixels full screen 1,536 bytes horizontal memory 26 MB display image memory 8-bit luminance, 256 shades of gray 8-bit chrominance, over 16 million colors CCIR 601 4:2:2
Format	
Sampling Rate	13.5 MHz
Geometric Error	Less than 1 percent, all modes
Resizing	Multi-element horizontal and vertical finite impulse response

Analog Processing	
Bandwidth	20 MHz
Differential Phase	Less than 2 degrees
Differential Gain	Less than 2 percent
Character Generator	Programmable, bit mapped

## ELECTRICAL

Operating Voltage	120 VAC (+15/-30%), 50/60 Hz or 230 VAC (+15/-30%), 50/60 Hz
Power	Less than 25 watts
Video Inputs	Nine (MX4009) or sixteen (MX4016) BNC, looping with programmable termination of 75 ohms or Hi-Z
Monitor Outputs	Three
Main	BNC, 75 ohms 4-pin mini-DIN, YC output (S-VHS)
Spot	BNC, 75 ohms
AUX	BNC, 75 ohms
VCR Inputs/Outputs	One each
VCR In	BNC, composite, 75 ohms 4-pin mini-DIN, YC input (S-VHS)
VCR Out	BNC, composite, 75 ohms 4-pin mini-DIN, YC output (S-VHS)
Alarm Inputs	Nine (MX4009) or sixteen (MX4016) individually programmable for N.O. or N.C.
Alarm Output	One Form-C relay, 0.5A continuous, 1A momentary

## GENERAL

Operating Temperature	32° to 122°F (0° to 50°C)
Relative Humidity	90%, non-condensing
Desktop Dimensions	1.75" H x 17.2" W x 12.2" D (4.45 x 43.69 x 30.99 cm)
Rack Mount Dimensions	1.75" H x 19" W x 12.2" D (1 RU) (4.45 x 48.26 x 30.99 cm) (Rack ears and screws provided for rack mounting.)
Unit Weight	10 lb (4.53 kg) approximate
Shipping Weight	14 lb (6.34 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class B (MX4009CD-X, MX4016CD-X)
- UL Listed (MX4009CD and MX4016CD)
- UL Listed to Canadian safety standards (MX4009CD and MX4016CD)
- Complies with Argentina compliance requirements under Res. 92/98. (MX4009CD-X and MX4016CD-X)
- FCC, Class A (MX4009CD and MX4016CD)
- U.S. Patent pending

## OPTIONAL ACCESSORIES

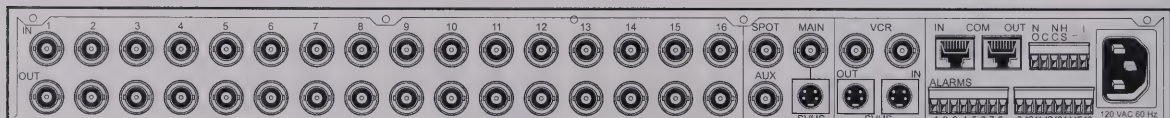
KBD4000**	Full-function keyboard controller; joystick control of pan/tilt functions. Use with Genex multiplexer and server.
KBD4002**	Same as KBD4000 except keypad control of pan/tilt functions.
MX4000SVR	Multiplexer server, 120 VAC, 60 Hz, for use with NTSC and RS-170 format multiplexers. Provides centralized control of up to 8 multiplexers by one or more operators.
MX4000SVR-X	Same as MX4000SVR except 230 VAC, 50 Hz, for use with PAL and CCIR format multiplexers.

### Notes:

- \* Pelco Genex multiplexers can normally decode tapes made with other manufacturer's multiplexers. However, Dedicated Micros models DM/SPG4/S/N/090 and DM/SPC4/D/N/6M must be properly programmed to create tapes that are compatible with Genex multiplexers. Tapes made with DM model SPR2AS/C/M/M are incompatible. (Refer to TechTip 00-3038 for details.)
- \*\* When used with 15-bit standard Coaxitron® receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt and lens functions and auxiliary on/off. It will not set or call presets, or support preset scan.

When used with the 32-bit extended Coaxitron® receivers (such as Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4000 will support all of the functions above, including set and call presets and patterns. It will not support programming of preset or pattern labels. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.

MX4016CD REAR VIEW



NOTE: MODEL MX4009CD HAS TWO ROWS OF 9 BNCs ONLY.



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www.pelco.com

Indicates change or addition.

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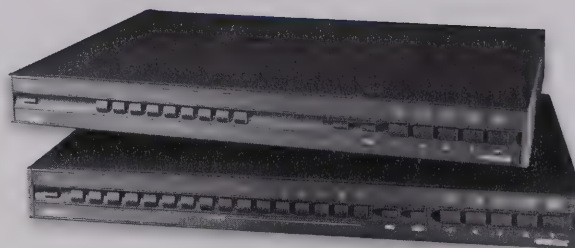


## Genex® Multiplexer

### MONOCHROME, DUPLEX, 9/16 VIDEO INPUTS

#### Product Features

- Full Duplex Operation
- "Covert" Feature Allows Selected Cameras to be Recorded, but not Displayed During Live Viewing or Playback. Viewing or Playback of "Covert" Cameras can be Password Protected
- Simultaneous Viewing of Up to 16 Cameras While Recording or Playing Tapes
- Advanced Digital Video Processing, Including Advanced Image Re-sizing and Digital Filtering. Provides High Quality Multi-Camera and Zoom Displays
- Looping Inputs
- Multi-Camera Display Modes – PIP (2), Quad (4), Nine (9), and Sixteen (16) Camera Displays
- Advanced Activity Detection – Programmable Detection Mask and Sensitivity Levels for Each Camera
- Four VCR Compatibility Modes – Standard, Auto Tracking, VCR Matching, and Custom
- Playback of Other Manufacturers' Tapes\* (see note on back)
- Menu Programming for Quick, Easy Setup
- Multi-language Support; English (Default), French, Spanish, or German
- On-Screen Alphanumeric Display – 12 Character Camera Titles, Time, Date, and Alarm
- Three Independent Monitor Outputs
  - Main Output – Full-Screen Call-up, Multi-Camera Displays, VCR Playback and Sequencing
  - Spot Monitor Output – Full-Screen Call-up, Sequencing, Activity, and Alarms
  - Auxiliary Monitor Output – Full-Screen Sequencing, Activity, and Alarms
- Alarm Handling – Priority or Exclusive Alarm Recording and Display
- Remote Control via RS-485 Communications Port
- Pan/Tilt and Lens Control via Coaxitron® \*\* (see note on back)



MX4009MD (TOP), MX4016MD (BOTTOM)

The **Genex**® high performance, monochrome duplex multiplexer utilizes the latest in digital video processing technology, providing high-quality recordings and outstanding multi-camera displays.

Available in 9- or 16-channel versions, **Genex** can multiplex up to 9 or 16 cameras for recording on a single VCR. During recording and playback any camera may be viewed independently or combined in a multi-camera display.

Unlike most multiplexers, **Genex** contains a powerful re-sizing engine that uses patented Active Image™ technology to provide broadcast-quality, image re-sizing for both multi-camera and zoom displays. This technology allows Genex to provide higher quality images with less aliasing.

**Genex** allows live or recorded cameras to be displayed full-screen or combined with others in a picture-in-picture, quad, nine, or sixteen camera display. Cameras may also be displayed sequentially in either full-screen or multi-camera format. An adjustable zoom mode provides full control of digital magnification of any camera for closer examination.

An advanced activity detector can prioritize cameras for faster recording and display independent of record or playback speeds. Two additional monitor outputs (spot and auxiliary) can be used to display full-screen cameras manually, sequentially, or as a result of alarms and activity detection.

**Genex** is easy to use; offers intuitive push-button controls for operation; and has password-protected, on-screen menus for easy system setup.



**DataFAX**  
SPEC: 21921  
MANUAL: Not Available through DataFAX

C1921 / REVISED 4-03



International Organization  
for Standardization  
Registered ISO 9001



MULTIPLEXER  
MONOCHROME, DUPLEX

## MODELS

MX4009MD	9-channel, monochrome duplex multiplexer, RS-170, 120 VAC, 60 Hz
MX4009MD-X	9-channel, monochrome duplex multiplexer, CCIR, 230 VAC, 50 Hz
MX4016MD	16-channel, monochrome duplex multiplexer, RS-170, 120 VAC, 60 Hz
MX4016MD-X	16-channel, monochrome duplex multiplexer, CCIR, 230 VAC, 50 Hz

## VIDEO

Input Level	1 Vp-p, composite
Video Standard	525 lines, 60 fields/second 625 lines, 50 fields/second
EIA RS-170	768 (H) x 512 (V) pixels full screen
CCIR	8-bit luminance, 256 shades of gray
Digital Image	Less than 1 percent, all modes
Geometric Error	Multi-element horizontal and vertical finite impulse response
Resizing	
Analog Processing	
Bandwidth	20 MHz
Character Generator	Programmable, bit mapped

## ELECTRICAL

Operating Voltage	120 VAC (+15/-30%), 50/60 Hz or 230 VAC (+15/-30%), 50/60 Hz
Power	Less than 25 watts
Video Inputs	Nine (MX4009) or sixteen (MX4016) BNC, looping with programmable termination of 75 ohms or Hi-Z
Monitor Outputs	Three
Main	BNC, 75 ohms
Spot	BNC, 75 ohms
AUX	BNC, 75 ohms
VCR Inputs/Outputs	One each
VCR In	BNC, composite, 75 ohms
VCR Out	BNC, composite, 75 ohms
Alarm Inputs	Nine (MX4009) or sixteen (MX4016) individually programmable for N.O. or N.C.
Alarm Output	1 Form-C relay, 0.5A continuous, 1A momentary

## GENERAL

Environmental	
Operating Temperature	32° to 122°F (0° to 50°C)
Relative Humidity	90%, non-condensing
Desktop Dimensions	1.75" H x 17.2" W x 12.2" D (4.45 x 43.69 x 30.99 cm)
Rack Mount Dimensions	1.75" H x 19" W x 12.2" D (1 RU) (4.45 x 48.26 x 30.99 cm) (Rack ears and screws provided for rack mounting.)
Unit Weight	10 lb (4.53 kg) approximate
Shipping Weight	14 lb (6.34 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class B (MX4009MD-X, MX4016MD-X)
- UL Listed (MX4009MD and MX4016MD)
- UL Listed to Canadian safety standards (MX4009MD and MX4016MD)
- Complies with Argentina compliance requirements under Res. 92/98. (MX4009MD-X and MX4016MD-X)
- FCC, Class A (MX4009CD and MX4016CD)
- U.S. Patent pending

## OPTIONAL ACCESSORIES

KBD4000**	Full-function keyboard controller; joystick control of pan/tilt functions. Use with Genex multiplexer and server.
KBD4002**	Same as KBD4000 except keypad control of pan/tilt functions.
MX4000SVR	Multiplexer server, 120 VAC, 60 Hz, for use with NTSC and RS-170 format multiplexers. Provides centralized control of up to 8 multiplexers by one or more operators.
MX4000SVR-X	Same as MX4000SVR except 230 VAC, 50 Hz, for use with PAL and CCIR format multiplexers.

### Notes:

\* Pelco Genex multiplexers can normally decode tapes made with other manufacturer's multiplexers. However, Dedicated Micros models DM/SPG4/S/N/090 and DM/SPC4/D/N/6M must be properly programmed to create tapes that are compatible with Genex multiplexers. Tapes made with DM model SPR2AS/C/M/M are incompatible. (Refer to TechTip 00-3038 for details.)

\*\* When used with 15-bit standard Coaxitron® receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt and lens functions and auxiliary on/off. It will not set or call presets, or support preset scan.

When used with the 32-bit extended Coaxitron® receivers (such as Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4000 will support all of the functions above, including set and call presets and patterns. It will not support programming of preset or pattern labels. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.

MX4016MD REAR VIEW



NOTE: MODEL MX4009MD HAS TWO ROWS OF 9 BNCs ONLY.



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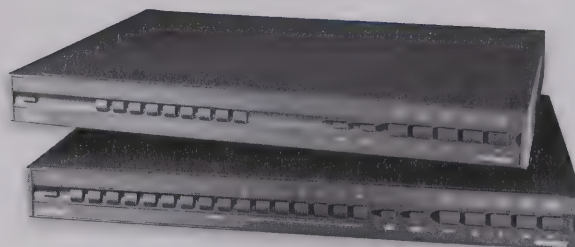
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## Genex<sup>®</sup> Series Multiplexer

### COLOR, SIMPLEX, 9/16 VIDEO INPUTS

#### Product Features

- Efficient Recording of up to 16 Cameras on 1 VCR
- "Covert" Feature Allows Selected Cameras to be Recorded, but not Displayed During Live Viewing or Playback. Viewing or Playback of "Covert" Cameras can be Password Protected
- Full-Screen Viewing of Cameras While Recording
- Advanced Digital Video Processing, Including Advanced Image Re-sizing and Digital Filtering. Provides High Quality Multi-Camera and Zoom Displays During Playback
- Looping Inputs
- Multi-Camera Display Modes – PIP (2), Quad (4), Nine (9) and Sixteen (16) Camera Displays
- Advanced Activity Detection – Programmable Detection Mask and Sensitivity Levels for Each Camera
- Four VCR Compatibility Modes – Standard, Auto Tracking, VCR Matching, and Custom
- Playback of Other Manufacturers' Tapes\* (see note on back)
- Direct Menu Programming for Quick, Easy Setup
- Multi-language Support; English (Default), French, Spanish, or German
- On-Screen Alphanumeric Display – 12 Character Camera Titles, Time, Date, Alarm and Video Loss
- Two Independent Monitor Outputs
  - Main Output – Full-Screen Call-up and Sequencing While Recording; Full-Screen Call-up and Multi-Screen Displays During Playback
  - Spot Monitor Output – Full-Screen Call-up, Sequencing, Activity and Alarms
- Alarm Handling – Priority or Exclusive Alarm Recording and Display



MX4009CS (TOP), MX4016CS (BOTTOM)

The **Genex**<sup>®</sup> high performance, color simplex multiplexer utilizes the latest in digital video processing technology, providing high-quality recordings or outstanding multi-camera displays.

Available in 9- or 16-channel versions, **Genex** can multiplex up to 9 or 16 cameras for recording on a single VCR. During recording any camera may be viewed independently or combined with others in a sequence. During playback any camera may be viewed independently or combined in a multi-camera display.

Unlike most multiplexers, **Genex** contains a powerful re-sizing engine that uses patented Active Image<sup>™</sup> technology to provide broadcast-quality, image re-sizing for both multi-camera and zoom displays. This technology allows Genex to provide higher quality images with less aliasing.

**Genex** allows live or recorded cameras to be displayed full-screen or combined with others in a picture-in-picture, quad, nine, or sixteen camera display. Cameras may also be displayed sequentially. An adjustable zoom mode provides full control of digital magnification of any camera for closer examination.

An advanced activity detector can prioritize cameras for faster recording and display. The additional spot monitor output can be used to display full-screen cameras manually, sequentially, or as a result of alarms.

**Genex** is easy to use; offers intuitive push-button controls for operation; and has password-protected, on-screen menus for easy system setup.



**DataFAX**  
SPEC: 21922  
MANUAL: Not Available through DataFAX

C1922 / REVISED 4-03



International Organization  
for Standardization,  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

MX4009CS	9-channel, color simplex multiplexer, NTSC, 120 VAC, 60 Hz
MX4009CS-X	9-channel, color simplex multiplexer, PAL, 230 VAC, 50 Hz
MX4016CS	16-channel, color simplex multiplexer, NTSC, 120 VAC, 60 Hz
MX4016CS-X	16-channel, color simplex multiplexer, PAL, 230 VAC, 50 Hz

## VIDEO

Input Level	1 Vp-p, composite
Video Standard	
NTSC	525 lines, 60 fields/second
PAL	625 lines, 50 fields/second
Digital Image	768 (H) x 512 (V) pixels full screen
	1,536 bytes horizontal memory
	26 MB display image memory
	8-bit luminance, 256 shades of gray
	8-bit chrominance, over 16 million colors
Format	CCIR 601 4:2:2
Sampling Rate	13.5 MHz
Geometric Error	Less than 1 percent, all modes
Resizing	Multi-element horizontal and vertical finite impulse response
Analog Processing	
Bandwidth	20 MHz
Differential Phase	Less than 2 degrees
Differential Gain	Less than 2 percent
Character Generator	Programmable, bit mapped

## ELECTRICAL

Operating Voltage	120 VAC (+15/-30%), 50/60 Hz or 230 VAC (+15/-30%), 50/60 Hz
Power	Less than 25 watts
Video Inputs	Nine (MX4009) or sixteen (MX4016) BNC, looping with programmable termination, 75 ohms Hi-Z
Monitor Outputs	Two
Main	BNC, 75 ohms
Spot	BNC, 75 ohms
VCR Inputs/Outputs	One each
VCR In	BNC, composite, 75 ohms
	4-pin mini-DIN, YC input (S-VHS)
VCR Out	BNC, composite, 75 ohms
	4-pin mini-DIN, YC output (S-VHS)
Alarm Inputs	Nine (MX4009) or sixteen (MX4016) individually programmable for N.O. or N.C.
Relay Output	One Form-C relay, 0.5A continuous, 1A momentary; programmable for alarm or activity activation

## GENERAL

Operating Temperature	32° to 122°F (0° to 50°C)
Relative Humidity	90%, non-condensing
Desktop Dimensions	1.75" H x 17.2" W x 12.2" D (4.45 x 43.69 x 30.99 cm)
Rack Mount Dimensions	1.75" H x 19" W x 12.2" D (1RU) (4.45 x 48.26 x 30.99 cm) (Rack ears and screws provided for rack mounting.)
Unit Weight	10 lb (4.53 kg) approximate
Shipping Weight	14 lb (6.34 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class B (MX4009CS-X, MX4016CS-X)
- UL Listed (MX4009CS and MX4016CS)
- UL Listed to Canadian safety standards (MX4009CS and MX4016CS)
- Complies with Argentina compliance requirements under Res. 92/98. (MX4009CS-X and MX4016CS-X)
- FCC, Class A (MX4009CS, MX4016CS)
- U.S. Patent pending

## OPTIONAL ACCESSORIES

KBD4000**	Full-function keyboard controller; joystick control of pan/tilt functions. Use with Genex multiplexer and server.
KBD4002**	Same as KBD4000 except keypad control of pan/tilt functions.

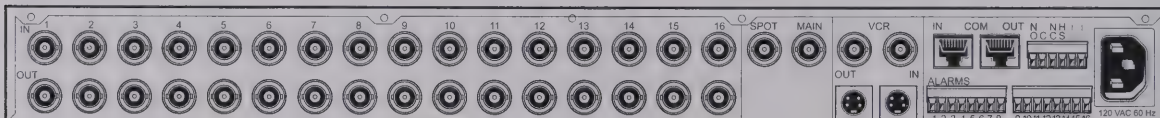
### Notes:

\* Pelco Genex multiplexers can normally decode tapes made with other manufacturer's multiplexers. However, Dedicated Micros models DM/SPG4/S/N/090 and DM/SPC4/D/N/6M must be properly programmed to create tapes that are compatible with Genex multiplexers. Tapes made with DM model SPR2AS/C/M/M are incompatible. (Refer to TechTip 00-3038 for details.)

\*\* When used with 15-bit standard Coaxitron® receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt and lens functions and auxiliary on/off. It will not set or call presets, or support preset scan.

When used with the 32-bit extended Coaxitron® receivers (such as Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4000 will support all of the functions above, including set and call presets and patterns. It will not support programming of preset or pattern labels. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.

MX4016CS REAR VIEW



NOTE: MODEL MX4009CS HAS TWO ROWS OF 9 BNCs ONLY.



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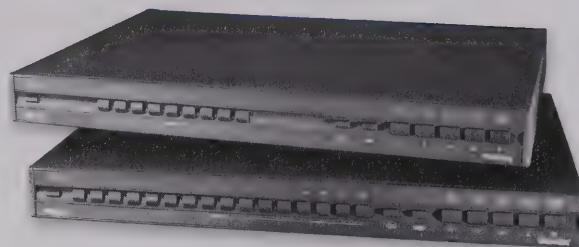


# Genex<sup>®</sup> Multiplexer

## MONOCHROME, SIMPLEX, 9/16 VIDEO INPUTS

### Product Features

- Efficient Recording of up to 16 Cameras on 1 VCR
- "Covert" Feature Allows Selected Cameras to be Recorded, but not Displayed During Live Viewing or Playback. Viewing or Playback of "Covert" Cameras can be Password Protected
- Full-Screen Viewing of Cameras While Recording
- Advanced Digital Video Processing, Including Advanced Image Re-sizing and Digital Filtering. Provides High Quality Multi-Camera and Zoom Displays During Playback
- Looping Inputs
- Multi-Camera Display Modes – PIP (2), Quad (4), Nine (9) and Sixteen (16) Camera Displays
- Advanced Motion Detection – Programmable Detection Mask and Sensitivity Levels for Each Camera
- Four VCR Compatibility Modes – Standard, Auto Tracking, VCR Matching, and Custom
- Direct Menu Programming for Quick, Easy Setup
- Multi-language Support; English (Default), French, Spanish, or German
- Playback of Other Manufacturers' Tapes\* (see note on back)
- On-Screen Alphanumeric Display – 12 Character Camera Titles, Time, Date, Alarm and Video Loss
- Two Independent Monitor Outputs
  - Main Output – Full-Screen Call-up and Sequencing While Recording; Full-Screen Call-up and Multi-Screen Displays During Playback
  - Spot Monitor Output – Full-Screen Call-up, Sequencing, Activity and Alarms
- Alarm Handling – Priority or Exclusive Alarm Recording and Display
- Remote Control via RS-485 Communications Port
- Pan/Tilt and Lens Control via Coaxitron<sup>®</sup> \*\* (see note on back)



MX4009MS (TOP), MX4016MS (BOTTOM)

The **Genex**<sup>®</sup> high performance, monochrome simplex multiplexer utilizes the latest in digital video processing technology, providing high-quality recordings or outstanding multi-camera displays.

Available in 9- or 16-channel versions, **Genex** can multiplex up to 9 or 16 cameras for recording on a single VCR. During recording any camera may be viewed independently or combined with others in a sequence. During playback any camera may be viewed independently or combined in a multi-camera display.

Unlike most multiplexers, **Genex** contains a powerful re-sizing engine that uses patented Active Image<sup>™</sup> technology to provide broadcast-quality, image re-sizing for both multi-camera and zoom displays. This technology allows **Genex** to provide higher quality images with less aliasing.

**Genex** allows live or recorded cameras to be displayed full-screen or combined with others in a picture-in-picture, quad, nine, or sixteen camera display. Cameras may also be displayed sequentially. An adjustable zoom mode provides full control of digital magnification of any camera for closer examination.

An advanced activity detector can prioritize cameras for faster recording and display. The additional Spot monitor output can be used to display full-screen cameras manually, sequentially, or as a result of alarms.

**Genex** is easy to use; offers intuitive push-button controls for operation; and has password-protected, on-screen menus for easy system setup.



**DataFAX**  
SPEC: 21923  
MANUAL: Not Available through DataFAX

C1923 / REVISED 4-03



International Organization  
for Standardization  
Registered ISO 9001



MULTIPLEXER  
MONOCHROME, SIMPLEX

# TECHNICAL SPECIFICATIONS

## MODELS

MX4009MS	9-channel, monochrome simplex multiplexer, RS-170, 120 VAC, 60 Hz
MX4009MS-X	9-channel, monochrome simplex multiplexer, CCIR, 230 VAC, 50 Hz
MX4016MS	16-channel, monochrome simplex multiplexer, RS-170, 120 VAC, 60 Hz
MX4016MS-X	16-channel, monochrome simplex multiplexer, CCIR, 230 VAC, 50 Hz

## VIDEO

Input Level	1 Vp-p, composite
Video Standard	EIA RS-170
CCIR	525 lines, 60 fields/second
Digital Image	625 lines, 50 fields/second
	768 (H) x 512 (V) pixels full screen
	8-bit luminance, 256 shades of gray
Geometric Error	Less than 1 percent, all modes
Resizing	Multi-element horizontal and vertical finite impulse response
Analog Processing	
Bandwidth	20 MHz
Character Generator	Programmable, bit mapped

## ELECTRICAL

Operating Voltage	120 VAC (+15/-30%), 50/60 Hz or 230 VAC (+15/-30%), 50/60 Hz
Power	Less than 25 watts
Video Inputs	Nine (MX4009) or sixteen (MX4016) BNC, looping with programmable termination 75 ohms Hi-Z
Monitor Outputs	Two
Main	BNC, 75 ohms
Spot	BNC, 75 ohms
VCR Inputs/Outputs	One each
VCR In	BNC, composite, 75 ohms
VCR Out	BNC, composite, 75 ohms
Alarm Inputs	Nine (MX4009) or sixteen (MX4016) individually programmable for N.O. or N.C.
Relay Output	1 Form-C relay, 0.5 A continuous, 1.0 A momentary; programmable for alarm or activity activation

## GENERAL

Environmental	
Operating Temperature	32° to 122°F (0° to 50°C)
Relative Humidity	90%, non-condensing
Desktop Dimensions	1.75" H x 17.2" W x 12.2" D (4.45 x 43.69 x 30.99 cm)
Rack Mount Dimensions	1.75" H x 19" W x 12.2" D (1 RU) (4.45 x 48.26 x 30.99 cm) (Rack ears and screws provided for rack mounting.)
Unit Weight	10 lb (4.53 kg) approximate
Shipping Weight	14 lb (6.34 kg) approximate

## CERTIFICATIONS/PATENTS

- CE, Class B (MX4009MS-X, MX4016MS-X)
- UL Listed (MX4009MS and MX4016MS)
- UL Listed to Canadian safety standards (MX4009MS and MX4016MS)
- Complies with Argentina compliance requirements under Res. 92/98. (MX4009MS-X and MX4016MS-X)
- FCC, Class A (MX4009MS, MX4016MS)
- U.S. Patent pending

## OPTIONAL ACCESSORIES

KBD4000**	Full-function keyboard controller; joystick control of pan/tilt functions. Use with Genex multiplexer and server.
KBD4002**	Same as KBD4000 except keypad control of pan/tilt functions.

### Notes:

\* Pelco Genex multiplexers can normally decode tapes made with other manufacturer's multiplexers. However, Dedicated Micros models DM/SPG4/S/N/D90 and DM/SPC4/D/N/6M must be properly programmed to create tapes that are compatible with Genex multiplexers. Tapes made with DM model SPR2AS/C/M/M are incompatible. (Refer to TechTip 00-3038 for details.)

\*\*When used with 15-bit standard Coaxitron® receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt and lens functions and auxiliary on/off. It will not set or call presets, or support preset scan.

When used with the 32-bit extended Coaxitron® receivers (such as Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4000 will support all of the functions above, including set and call presets and patterns. It will not support programming of preset or pattern labels. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.

MX4016MS REAR VIEW



NOTE: MODEL MX4009MS HAS TWO ROWS OF 9 BNCs ONLY.



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## KBD4000 Multiplexer Keyboard

### FULL-FUNCTIONALITY, FIXED/VARIABLE SPEED, JOYSTICK PTZ CONTROL

#### Product Features

- Remote Control of Multiplexer Functions
- Select up to 256 Cameras from One Keyboard Connected to a String of MX4000 Genex® Multiplexers
- Select up to 128 Cameras from a Maximum of Four Keyboards through an MX4000SVR Genex Multiplexer Server
- Joystick for Fixed Speed and Variable Speed Control of Pan/Tilt Units
- Preset Position and Pattern Control
- Main and Spot Monitor Control
- Digital Zoom Control on Main Monitor
- Auxiliary Operation



The **KBD4000** keyboard is a full-function keyboard controller for the MX4000 Genex® Multiplexer and the MX4000SVR Genex Multiplexer Server.

There are two modes of operation—multiplexer mode and multiplexer server mode—depending on whether the keyboard is connected to a multiplexer or to a server.

In the multiplexer mode, a single keyboard interfaces up to 16 multiplexers that are daisy-chained together. With 9-channel multiplexers, the keyboard can control up to 144 cameras; with 16-channel multiplexers, up to 256 cameras can be controlled.

In the multiplexer server mode, up to four keyboards can be connected to a server, which interfaces up to eight multiplexers. Up to 72 cameras can be controlled with 9-channel multiplexers or 128 cameras with 16-channel multiplexers.

In addition to performing all the control functions that can be done from the front panel of the multiplexer, the keyboard also features a three-axis joystick and additional keys for full control of fixed speed and variable speed pan, tilt, and lens functions.

Under control of the keyboard, cameras can be viewed on the main and spot monitor outputs of the multiplexer. On the main monitor, select full-screen or multiple-screen (4, 9, or 16) images or picture-in-picture display. Get a closer look with the 2X and 4X zoom feature. Use the spot monitor for control of pan/tilt and zoom functions and to operate presets, auxiliaries, and patterns.

When used with a Genex multiplexer, the **KBD4000** keyboard is capable of Coaxitron® control of pan, tilt, and lens functions, including setting and calling presets and patterns. (see note on back page)

The keyboard provides two methods of camera addressing. One method allows selection of cameras by entering the multiplexer unit ID (1-16) followed by the desired camera (1-16). The second method allows selection of cameras by entering an incremental camera number (unit 1 = cameras 1-16, unit 2 = cameras 17-32, etc.).

The keyboard is supplied with a 25-foot (7.6 m) data cable with RJ-45 connectors for connecting the keyboard to a multiplexer or to the Local Keyboard Port of a server. One keyboard can be connected to a multiplexer or the Local Keyboard Port of a server. Three additional keyboards can be connected to the Remote Keyboard(s) Port of a server. Multiple keyboards may not be connected without a server (MX4000SVR). If using the Remote Keyboard(s) Port, a remote keyboard wiring kit (KBDKIT/KBDKIT-X) is required for each keyboard.



**DataFAX**  
SPEC: 21918  
MANUAL: Not Available through DataFAX

C1918/REVISED 10-03



U.S. Patent D-464,654

International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODEL

KBD4000

Full-function keyboard controller; use with Genex multiplexer and server

## Electrical

Input Voltage

12 VAC or  $\pm 12$  VDC

Power Consumption

5 watts

## KEYBOARD COMMUNICATION

Keyboard Interface

RS-485 (25-foot flat cable supplied)

Connector Type

Data

RJ-45 8-pin modular (female)

## MECHANICAL

Keyboard Keypad

Joystick

Mechanical

Three-axis, vector solving, with twisting, return-to-center head

Digital Display

Main/Spot

Monitor Indicators

Two red seven-segment LEDs

Two green LEDs

## GENERAL

Operating Temperature

20° to 120°F (-7° to 49°C)

Humidity

10% to 90%, non-condensing

Dimensions

2.25" H x 9.50" W x 7.125" L  
(5.72 x 24.13 x 18.10 cm)

Weights

Unit

2.5 lb (1.12 kg)

Shipping

4 lb (1.81 kg)

## CERTIFICATIONS/RATINGS/PATENTS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B
- U.S. Patent D-464,654

## SUPPLIED ACCESSORIES

KBD4000

25-foot (7.6 m) RJ-45 data cable

## OPTIONAL ACCESSORIES

KBDKIT

Remote keyboard wiring kit. Required if using Remote Keyboard Port on multiplexer server or if extending Local Keyboard Port beyond 25 feet (7.6 m). Maximum distance of 4,000 feet (1,219 m) to last keyboard in daisy chain. Use shielded twisted pairs, such as Belden 9843 or equivalent, that meets RS-485 standards. (One kit for each keyboard required.)

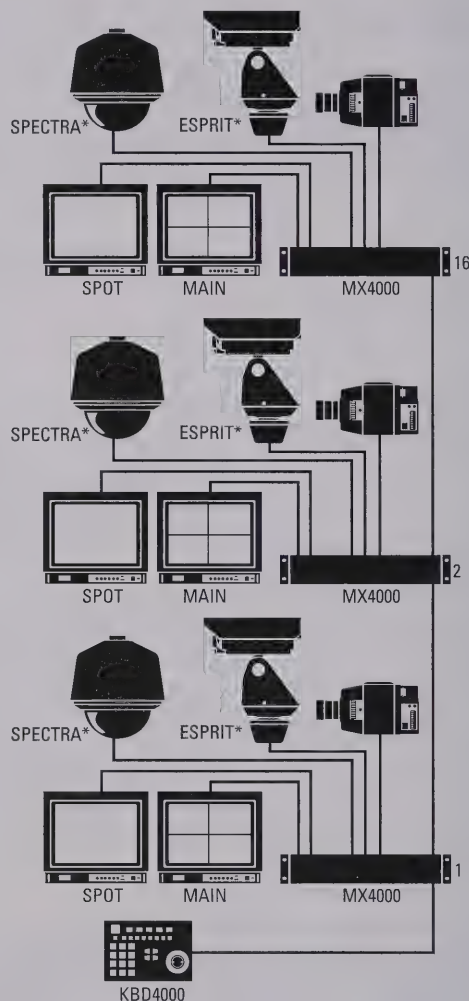
KBDKIT-X

Same as KBDKIT except 230 VAC to 12 VAC transformer.

## Note:

When used with 15-bit standard Coaxitron receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4000 supports all pan, tilt, and lens functions, and auxiliary on/off. The keyboard will not set or call presets or support preset scanning.

When used with 32-bit extended Coaxitron receivers (such as Esprit®, Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4000 supports all the functions above, including the setting and calling of presets and patterns. It will not support programming of labels for presets or patterns. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.



MULTIPLEXER MODE

\* INCLUDES BUILT-IN RECEIVER FOR CONTROL OF PAN/TILT/LENS FUNCTIONS. OTHER PAN/TILT UNITS MAY REQUIRE SEPARATE RECEIVER.



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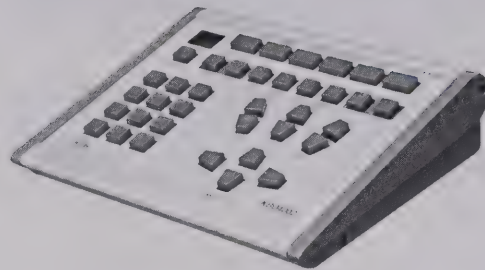


## KBD4002 Multiplexer Keyboard

### FULL-FUNCTIONALITY, FIXED/VARIABLE SPEED, PTZ CONTROL

#### Product Features

- Economical Full-Feature Keyboard
- Select up to 256 Cameras from One Keyboard Connected to a String of MX4000 Genex® Multiplexers
- Select up to 128 Cameras from a Maximum of Four Keyboards through an MX4000SVR Genex Multiplexer Server
- Variable Speed Control of Pan/Tilt Units Made by Keypad Selection Using "Select-a-Speed" Feature
- Preset Position and Pattern Control
- Main and Spot Monitor Control
- Digital Zoom Control on Main Monitor
- Auxiliary Operation



MULTIPLEXER  
KEYBOARD

The **KBD4002** keyboard is an economical full-function keyboard controller for the MX4000 Genex Multiplexer and the MX4000SVR Genex Multiplexer Server.

There are two modes of operation—multiplexer mode and multiplexer server mode—depending on whether the keyboard is connected to a multiplexer or to a server.

In the multiplexer mode, a single keyboard interfaces up to 16 multiplexers that are daisy-chained together. With 9-channel multiplexers, the keyboard can control up to 144 cameras; with 16-channel multiplexers, up to 256 cameras can be controlled.

In the multiplexer server mode, up to four keyboards can be connected to a server, which interfaces up to eight multiplexers. Up to 72 cameras can be controlled with 9-channel multiplexers or 128 cameras with 16-channel multiplexers.

In addition to performing all the control functions that can be done from the front panel of the multiplexer, the keyboard also features additional keys for complete operation of the fixed speed and variable speed pan, tilt, and lens functions. Control of variable speed pan and tilt receivers is accomplished with the number keypad using the "select-a-speed" feature. With select-a-speed, each digit (1-9) signifies a relative pan and tilt speed. The number 1 represents the slowest speed available while the number 9 speed equates to turbo pan (for those receivers capable of supporting turbo pan speed). When the number 9 is entered, the tilt will operate at the number 8 speed. Entering the number 0 sets a mid-range speed.

Under control of the keyboard, cameras can be viewed on the main and spot monitor outputs of the multiplexer. On the main monitor, select full-screen or multiple-screen (4, 9 or 16) images or picture-in-picture display. Get a closer look with the 2X and 4X zoom feature. Use the spot monitor for control of pan/tilt and zoom functions, and to operate presets, auxiliaries, and patterns. The spot monitor shows a full screen view only and does not have the zoom feature.

When used with a Genex multiplexer, the **KBD4002** keyboard is capable of Coaxitron® control of pan, tilt, and lens functions, including setting and calling presets and patterns. (see note on back page)

The keyboard provides two methods of camera addressing. One method allows selection of cameras by entering the multiplexer unit ID (1-16) followed by the desired camera (1-16). The second method allows selection of cameras by entering an incremental camera number (unit 1 = cameras 1-16, unit 2 = cameras 17-32, etc.).

The keyboard is supplied with a 25-foot (7.6 m) data cable with RJ-45 connectors for connecting the keyboard to a multiplexer or to the Local Keyboard Port of a server. One keyboard can be connected to a multiplexer or the Local Keyboard Port of a server. Three additional keyboards can be connected to the Remote Keyboard(s) Port of a server. Multiple keyboards may not be connected without a server (MX4000SVR). If using the Remote Keyboard(s) Port, a remote keyboard wiring kit (KBDKIT/KBDKIT-X) is required for each keyboard.



DataFAX  
SPEC: 2581

MANUAL: Not Available through DataFAX

C581 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODEL

KBD4002

Economical full-function keyboard controller for use with Genex multiplexer and server

Electrical

Input Voltage

12 VAC or  $\pm 12$  VDC

Power Consumption

5 watts

## KEYBOARD COMMUNICATION

Keyboard Interface

RS-485 (25-foot flat cable supplied)

Connector Type

RJ-45 8-pin modular (female)

## MECHANICAL

Keyboard Keypad

Mechanical

Digital Display

Two red seven-segment LEDs

Main/Spot

Monitor Indicators

Two green LEDs

## GENERAL

Ambient Operating

Temperature

20° to 120°F (-7° to 49°C)

Humidity

10% to 90%, non-condensing

Dimensions

2.25" H x 8.125" W x 7.125" L  
(5.72 x 20.64 x 18.10 cm)

Unit Weight

2.1 lb (0.97 kg)

Shipping Weight

3 lb (1.35 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## OPTIONAL ACCESSORIES

KBDKIT

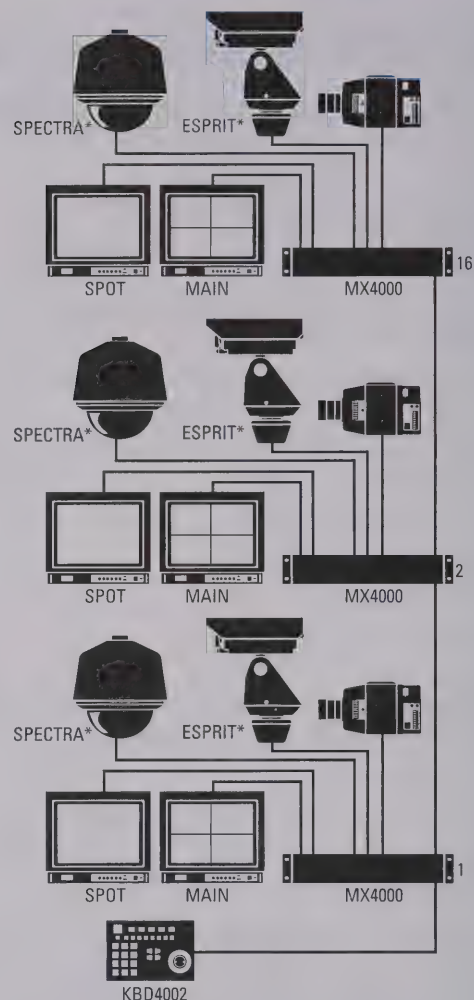
Remote keyboard wiring kit with RJ-45 wall block and 120 VAC to 12 VAC transformer. Required if using Remote Keyboard Port on multiplexer server or if extending Local Keyboard Port beyond 25 feet (7.6 m). Maximum distance of 4,000 feet (1,219 m) to last keyboard in daisy chain. Use shielded twisted pairs, such as Belden 9843 or equivalent, that meets RS-485 standards. (One kit for each keyboard required.)

Same as KBDKIT except 230 VAC to 12 VAC transformer.

KBDKIT-X

**Note:** When used with 15-bit standard Coaxitron receivers (such as the CX9000 Series, the PT7700, and the ED25/27/28/29), the KBD4002 supports all pan, tilt, and lens functions, and auxiliary on/off. The keyboard will not set or call presets or support preset scanning.

When used with 32-bit extended Coaxitron receivers (such as Esprit®, Intercept®, Spectra®, and Legacy® LRD41C21/LRD41C22 Series), the KBD4002 supports all the functions above, including the setting and calling of presets and patterns. It will not support programming of labels for presets or patterns. If labels for presets or patterns are required, they would need to be programmed with a different control, such as the MPT9500.



\* INCLUDES BUILT-IN RECEIVER FOR CONTROL OF PAN/TILT/LENS FUNCTIONS. OTHER PAN/TILT UNITS MAY REQUIRE SEPARATE RECEIVER.



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# MX4000SVR Multiplexer Server

## MICROPROCESSOR-BASED SWITCHER/CONTROLLER

### Product Features

- Inputs for Four KBD4000 Keyboards for Control by More Than One Operator
- Eight MX4000 Genex® Multiplexer Inputs for Control of up to 128 Cameras
- Four Monitor Outputs
- Programming Menus for Server Setup
- Looping Video Outputs to Connect Additional Monitors or Equipment

The **MX4000SVR** Genex® multiplexer server expands the flexibility of your multiplexer system so that as many as four operators can share control of the system.

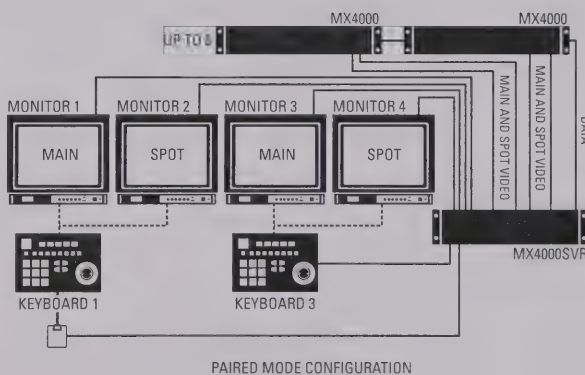
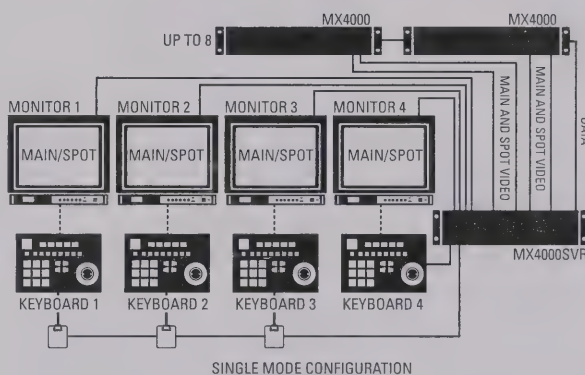
Up to eight MX4000 Genex multiplexers can be connected to the server, which can be controlled from as many as four keyboards. Up to 72 cameras can be controlled with 9-channel multiplexers or 128 cameras with 16-channel multiplexers.

The server has two video inputs for each multiplexer—one from the main monitor and one from the spot monitor. The server can route the main or spot monitor output from any of the eight multiplexers to any of the server's four monitor outputs.

The server can operate in single mode (one keyboard controls one monitor) or paired mode (one keyboard controls two monitors).

Looping outputs are available for sending the video inputs from each multiplexer to additional monitors or other equipment such as a matrix switcher.

On-screen menus allow programming of multiplexer titles, keyboard and monitor operation, and multiplexer sequencing.



MULTIPLEXER  
SWITCHER/CONTROLLER



DataFAX  
SPEC: 21919  
MANUAL: 219236

C1919 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MX4000SVR	Genex® server; integrates up to eight MX4000 Series multiplexers into a single system, 120 VAC, 60 Hz
MX4000SVR-X	Same as MX4000SVR except 230 VAC, 50 Hz

## RELATED PRODUCTS

KBD4000	Full-function keyboard controller; joystick control of pan/tilt functions.
KBD4002	Same as KBD4000 except keypad control of pan/tilt functions.

## VIDEO INPUTS

Number of Inputs	16
Type	75 ohms unbalanced, terminating or looping; jumper selectable
Level	1 Vp-p
Connector Type	Panel-mount BNC

## VIDEO OUTPUTS

Number	4 (maximum)
Type	75 ohms unbalanced
Level	1 Vp-p
Video Fail Detection	
Type	Vertical sync detector
Action	Switch to back up sync generator
Connector Type	Panel-mount BNC

## VIDEO SPECIFICATIONS

Bandwidth	17 MHz
Frequency Response	Flat to 8 MHz, $\pm 1.0$ dB to 12 MHz
Gain	Unity ( $\pm 1$ dB)
Differential Gain	2% typical
Differential Phase	0.2° typical
Tilt	0.5% typical
Signal to Noise	-55 dB (peak to peak vs. RMS noise)
DC Output	Zero volts
Cross talk	-50 dB typical at 3.58 MHz

## CHARACTER GENERATOR

Display	White with black border
Program Menus	Raster background with white characters

## KEYBOARD INTERFACE

Number of Ports	2 (remote and local)
Number of Independent Keyboards	4
Baud Rate	9600
Connector Type	RJ-45 8-pin modular (female)

## POWER SUPPLY

Input Voltage	120 VAC, 50/60 Hz or 230 VAC, 50 Hz
Power Consumption	10 watts
Ambient Operating Temperature	20° to 120°F (-7° to 49°C)
Humidity	10% to 90%, non-condensing

## GENERAL

Dimensions	
With rack ears	3.50" H x 19.00" W x 11.25" D (2 RUs) (8.89 x 48.26 x 28.58 cm)
Without rack ears	3.50" H x 17.00" W x 11.25" D (8.89 x 43.18 x 28.58 cm)
Mounting	Factory configured for EIA rack mount; rack ears can be removed for wall mount or free standing applications
Construction	20-gauge aluminum
Unit Weight	10.24 lb (4.65 kg)
Shipping Weight	14 lb (6.34 kg)

## OPTIONAL ACCESSORIES

KBDKIT	Remote keyboard wiring kit with RJ-45 wall block and 120 VAC to 12 VAC transformer. Required if using Remote Keyboard Port on multiplexer server or if extending Local Keyboard Port beyond 25 feet. Maximum distance of 4,000 feet (1,219 m) to last keyboard in daisy chain. Use shielded twisted pairs, such as Belden 9843 or equivalent, that meets RS-485 standards. (One kit for each keyboard required.)
KBDKIT-X	Same as KBDKIT except 230 VAC to 12 VAC transformer.

## CERTIFICATIONS

- CE, Class A (MX4000SVR-X)
- FCC, Class A (MX4000SVR)



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## QD104 Series Digital Quad Video Processor

### COLOR/MONOCHROME, ALARMS

#### Product Features

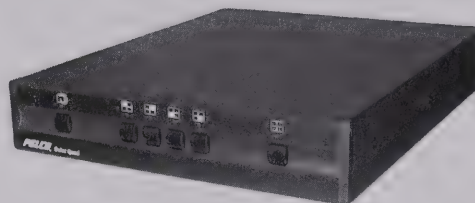
- High-Quality Quad Display (1024H x 512V)
- Real-Time Quad Video
- Low Cost
- Four Camera Inputs with Four Looping Outputs
- Quad Monitor Output That Displays Continuous Four-Camera Image
- Call Monitor Output That Displays Full-Screen or Quad Image
- Sequencing of Full-Screen and Quad Views
- Automatic Time-Base Correction Eliminates the Need for Camera Synchronization
- Five Alarm Inputs, One Alarm Output

The **QD104 Series Quad** is a high quality, low cost, color/monochrome video processor capable of displaying full-screen or quad views of four camera inputs.

A quad monitor output displays a continuous quad image. For greater versatility, a call monitor output offers several additional viewing options. For more detail or easier viewing, the call monitor output can display a full-screen view of any camera output. Or this output can be used to display the quad image on a second monitor. And the call monitor output supports sequencing. Sequencing can include full-screen views of any of the four cameras as well as the quad image. Camera selection and sequence programming for the call monitor is done with front panel push buttons.

All camera inputs have looping outputs that add to the capability of the quad by providing connections for additional video equipment.

A real-time quad update rate assures live video on all camera outputs. And automatic time base correction means no external synchronization of cameras is required. If any camera input loses video, the monitor display for that camera appears black.



QUAD  
COLOR/MONOCHROME

There are five alarm inputs, one for each of the four cameras, plus one for the quad input. When there is an alarm, that camera is switched to the call monitor's output for the duration of the alarm or until an operator acknowledges the alarm by pressing the front panel button associated with the alarmed camera. Multiple alarms will sequence at a two-second rate. An alarm output can trigger a VCR or an external alarm indicator, such as a light or buzzer.

The quad comes in a desktop cabinet of the same style as the Genex® Series multiplexer. A 9-inch (23 cm) monitor can be placed on top of the unit. A separate rack kit provides all the hardware necessary to mount one or two quads in a standard 19-inch (48 cm) equipment rack. The rack kit includes a filler panel when installing a single quad.



**DataFAX**  
**SPEC:** 2660  
**MANUAL:** 26606

C660 / REVISED 11-03

International Organization  
for Standardization  
Registered ISO 9001  
**ISO 9001**  
CERTIFIED

## MODELS

QD104C	Color quad, NTSC, 120 VAC, 60 Hz
QD104M	Monochrome quad, EIA, 120 VAC, 60 Hz

## VIDEO

Input Level	1 Vp-p, composite
Video Standard	525 lines, 60 fields/second
Digital Image	1024 (H) x 512 (V) pixels
Quad Update Rate	Real time
Analog Frequency Response	Better than 12 MHz
Crosstalk at Color Subcarrier	Better than -60 dB
Differential Gain	Less than 2 percent
Differential Phase	Less than 2 degrees
Signal-to-Noise Ratio	Better than -60 dB

## ELECTRICAL

Operating Voltage	12 VAC; unit includes power supply
Power	6 watts
Video Inputs	Four, BNC, looping, 75-ohm/Hi Z termination
Monitor Outputs	Two, BNC, 75 ohms
Alarm Inputs	Five N.O. inputs
Alarm Output	10K ohm output resistance; TTL, CMOS compatible
Alarm Clearance	Automatic with manual override
Sequence Dwell Times	Programmable for 2, 4, 8, or 16 seconds

## GENERAL

Operating Temperature	32 to 120°F (0 to 49°C)
Relative Humidity	95%, non-condensing
Dimensions	1.73" H x 10.20" D x 8.44" W (4.39 x 25.90 x 21.43 cm)
Finish	Charcoal gray
Unit Weight	3 lb (1.36 kg)
Shipping Weight	4 lb (1.81 kg) approximate

## CERTIFICATIONS

- FCC, Class B (QD104C)
- FCC, Class A (QD104M)

## OPTIONAL ACCESSORIES

RK100	Rack-mount kit (1 RU) for mounting one or two QD100 Series Quads in a standard 19-inch rack. Blank filler panel provided.
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QD104 REAR VIEW



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## VIDEO RECORDERS

### DVRs and VCRs

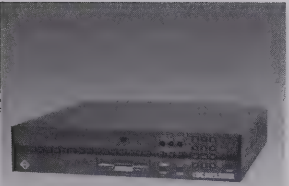


#### Digital Video Recorder (DVR) Product Overview

Pelco offers the most comprehensive line of Digital Video Recorders in the industry. Ranging from a few inputs to a few thousand inputs, with internal storage or external RAID capable storage systems, Pelco has a DVR that will provide you the results you need.

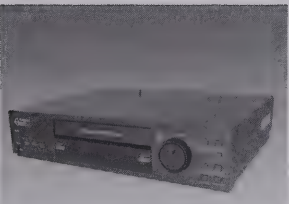
**DX1000** (embedded OS). This compact DVR has VCR-like controls on the front panel, for easy access. The DX1000 features 30 GB or 60 GB capacity.

**DX2000** (embedded OS). This high-resolution DVR may be connected to 16 serial devices, such as cash registers or ATMs. Users may record and query transaction data (by time, date, number, or text) along with the video. The DX2000 has a storage capacity of up to 640 GB and can be remotely operated on a standard Web browser.



**DX3100** (embedded OS) The DX3100 combines recording, multiplexing, and PTZ control into one unit, with a storage capacity of up to 240 GB. The system's remote software (included) allows you to group cameras and view up to 16 cameras in remote locations. The DX3100 features a handheld remote control, video motion detection, and image authentication.

**DX7100** (Windows 2000). This flexible and powerful DVR can connect to 100 8- or 16-channel DX7100s and offers up to 480 GB of capacity. The DX7100 features remote site access and high-speed search operations such as time and date searching, index searching, skip searching, and alarm list searching. This DVR also offers the Watermark Viewer for detecting image alteration and the Hardware Watchdog system to automatically restart the recorder in the event of power interruption.



**DX8000** (Windows 2000). The DX8000 is a feature-packed, mainstream, mid-range to high-end DVR capable of recording up to 16 channels of continuous video. With internal storage capacities topping out at 1 TB, the DX8000 offers motion, sensor, and schedule recording modes, as well as live and playback viewing. Each model features extensive search capabilities, including index, thumbnail, and intelligent pixel searching. Other feature highlights include on-screen PTZ, ability to export to a variety of media, and full TCP/IP implementation facilitating remote operation from a variety of platforms. The DX8000 supports server-to-server operation as well as PC, web, and PocketPC™ hand-held client connectivity.

**Enterprise-Class DVRs** (Windows 2000). The DX9100 and DX9200 are designed for high-end applications with common control from a centralized ViewStation PC, the DX9100VSR. These DVRs can be linked over a network, enabling hundreds or even thousands of cameras to be recorded simultaneously. The DVR management feature enables automatic video routing via the Pelco 9760 matrix switch to a back-up DVR in case of a primary DVR failure.

- **DX9100.** The DX9100 supports up to 16 channels of video at 7.5 ips, 15 ips or 30 ips per camera. Internal storage options range from 500 to 1500 GB.
- **DX9200.** The DX9200 expands storage capacity by using external HDD RAID arrays to allow for up to 14 TB of storage. The DX9200 takes a modular approach in the number of video inputs ranging from 8 cameras to 48 cameras per recorder.

Need an economical digital surveillance system? If so, our **VIDEO4X4** system may be the perfect solution for you. This plug-and-play system features a quad monitor, four cameras (including lens, mounting bracket, and cabling) and a 30 GB or 60 GB digital video recorder. Refer to the **VIDEO4X4** specification sheet at the end of the DVR section for more details about this product.

#### Time Lapse Recorders

Pelco TLR 3000 Series VCRs are full-featured, versatile time-lapse recorders designed for security applications. Available models include 40-hour, 96-hour, and 168-hour recorders (NTSC format only). All models can record on standard VHS tape.



# DX SERIES

## DIGITAL VIDEO RECORDERS

### COMPARISON SHEET



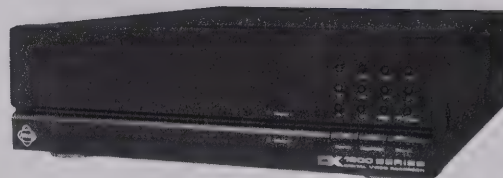
		DX1000	DX2000	DX3100	DX7100	DX8000	DX9100	DX9200
GENERAL	Camera Inputs	4	8, 16	8, 16	8, 16	8, 16	16	DX9200H Series 16/32/48 DX9200F Series 8/16/24/32/40
	Looping	No	Yes	Yes	No	Yes	Yes	Yes
	Operating System	Embedded	Embedded	Embedded	Windows 2000	Win 2000 SP4	Win 2000 SP3	Win 2000 SP3
	Alarm inputs	4	8, 16	4	8	8, 16	16	2 per camera when integrated with CM9760-ALM
	Audio Inputs	None	None	None	None	8, 16	None	None
	Relay outputs	1	2	2	8	8, 16	2	1 per camera when integrated with CM9760-REL
	Duplex	No	Yes	Yes	Yes	Yes	Yes	Yes
DISPLAY OPTIONS LIVE	Monitor Outputs	1 Analog	1 Analog	1 Analog	1 SVGA, 1 Analog	1 SVGA, 1 Analog, 2 Additional Analog (Optional)	1 SVGA	1 SVGA
	NTSC/PAL Switchable	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Camera Display	1, 4	1	1, 4, 9, 16	1, 4, 9, 16	1, 4, 6, 9, 10, 13, 16	1, 4	1, 4
	Digital Zoom	No	No	Yes	No	No	Yes	Yes
	Camera Display	1	1	1, 4, 9, 16	1, 4, 9, 16	1, 4, 6, 9, 10, 13, 16	1, 4	1, 4
	Shuttle Function	Forward/Reverse	Forward/Reverse	Forward/Reverse	Forward/Reverse	Forward/Reverse	Forward/Reverse	Forward/Reverse
	Select by Camera	Yes	Yes	Yes	Yes	Yes	Yes	Yes
DISPLAY OPTIONS PLAYBACK	Digital Zoom	No	No	Yes	No	Yes	Yes	Yes
	Compression	MPEG	WAVELET	MPEG	M-JPEG	Pelco Proprietary (Based on H.263)	MPEG	MPEG
	Image Size	352 x 240	720 x 240	640 x 240 or 352 x 240	320 x 240 (NTSC) or 352 x 288 (PAL)	Up to 720 x 480 (NTSC) or 720 x 576 (PAL)	Varies by model. 352 x 240 (NTSC) or 352 x 288 (PAL) or 704 x 240 (NTSC) or 704 x 288 (PAL)	Varies by model. 352 x 240 (NTSC) or 352 x 288 (PAL) or 704 x 240 (NTSC) or 704 x 288 (PAL)
	Event Record Modes	External Event (Alarm)	External Event (Alarm), Internal Video Motion Detection, Data Exceptions	External Event (Alarm) or Internal Video Motion Detection	External Event (Alarm) or Internal Video Motion Detection	External Event (Alarm) or Internal Video Motion Detection	External Event (alarm) or Internal Video Motion Detection	External Event (alarm) or Internal Video Motion Detection
	Continuous Record Modes	Time-lapse, individual record, scheduled record	Time-lapse, individual record, scheduled record. Scheduled motion, ATM or Point-of- Sale (POS) Terminal.	Time-lapse, individual record, scheduled record	Time-lapse, individual record, scheduled record	Time-lapse, individual record, scheduled record	Time-lapse, individual record, scheduled record	Time-lapse, individual record, scheduled record
	Alarm Record Modes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Pre-Alarm	No	No	No	Yes	Yes	Yes	Yes
RECORD FUNCTIONS	Video Motion Detection	No	Yes	Yes	Yes	Yes	Yes	Yes
	Image Authentication	No	Yes	Yes	Yes	Yes	Yes	Yes
	Image Record Rate	30 images/sec	16 images/sec	30 images/sec	60 images/sec (duplex) 160 images/sec (simplex)	Varies by model. Up to 30 images/sec per camera	Varies by model. Up to 30 images/sec per camera	Varies by model. Up to 30 images/sec per camera
	Hard Drive Options	30/60 GB	80-640 GB	60/120/240 GB	120-480 GB	80-1000 GB	500-1500 GB	External RAID storage up to 14TB
	Archive Device	VCR	Remote PC	Floppy	CD-RW	CD-RW	CD-RW	CD-RW
	Archive while recording	No	Yes	Yes	Yes	Yes	Yes	Yes
	Connect via	N/A	PSTN, TCP/IP	TCP/IP	PSTN, ISDN, TCP/IP	TCP/IP	TCP/IP	TCP/IP
REMOTE CONNECTION	Live and Recorded Video	No	Yes, Full Duplex	Yes, Duplex	Yes	Yes, Full Duplex	Yes, Full Duplex	Yes, Full Duplex
	PTZ Control	No	Yes	Yes	Yes	Yes	No	No

## DX1000 Series Digital Video Recorder

### 4 CAMERA INPUTS, 30/60 GB HARD DRIVE

#### Product Features

- Four Inputs for Fixed Cameras
- 30/60 GB Hard Drive for Video Storage
- Quad Camera Display for Live Viewing While Recording
- Continuous, Alarm, and Scheduled Recording Modes
- Easy Playback and Forward/Reverse Search
- Playback by Date, Time, and Camera
- On-Screen Menu Programming
- 4 Alarm Inputs, 1 Alarm Output
- Compatible with all Pelco Analog Monitors



The **DX1000** Digital Video Recorder (DVR) is a high-quality compact recorder that combines the functions of a recorder and multiplexer into one unit. Having no tapes to maintain, replace, or rewind means that this recorder can be set up once and virtually forgotten about until and unless a review of the video becomes necessary. It also dramatically reduces the down time for maintenance or repair that is generally associated with VCRs.

The **DX1000** can be placed on a shelf or desktop for easy access to the front panel controls for operation and programming.

A quad display of live video from all four cameras can be viewed while recording.

Recording can be done continuously, for a scheduled time in a 24-hour period, or on an alarm input basis. Each camera has its own alarm input for alarm-activated recording. Using a combination of these programmable features allows the user to extend the total recording time.

Two models, one with a 30 GB hard drive and the second with a 60 GB hard drive, generally allow continuous recording for up to two or four weeks respectively under the most common recording conditions. However, recording time will vary depending on quality, number of cameras recorded, and record rate. When the available hard drive storage space is consumed, the **DX1000** automatically begins recording over the oldest video. This means that the user need not have to worry about rewinding or changing tapes, or replacing them as they wear out.

Recording can be stopped at any time to play back video. Entering the desired time, date, and camera number allows the user to access any recorded video instantly. Search functions during playback allow frame-by-frame viewing, fast playback, and playback of alarm events.

The DVR uses password protection to guard against unauthorized or unintentional recording or playback.

VIDEO RECORDERS  
DX1000 SERIES DVR



DataFAX

SPEC: 2680

MANUAL: Not Available through DataFAX

C680 / REVISED 6-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

DX1004-030	Four-channel digital video recorder, 30 GB HDD, simplex operation (cannot record and play back video at the same time)
DX1004-060	Same as DX1004-030 except has 60 GB HDD

**Note:** Pelco also offers an economical digital surveillance system featuring the DX1000 Series recorder. These plug-n-play systems feature a 14-inch quad monitor, four cameras (including lens, mounting brackets, and cabling) and choice of 30 GB or 60 GB recorder. (See VIDEO4X4 specification sheet for details.)

## ELECTRICAL/VIDEO/AUDIO

Input Voltage	80-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	20 watts
Video Standard	NTSC or PAL, switchable
Video Compression	MPEG
Image Size	352 x 240 pixels, true color
Recording Speed	1-30 ips, depending on system setup
Video Storage	
DX1004-030	30 GB hard drive
DX1004-060	60 GB hard drive
Video Inputs	4
Video Outputs	2 (1 monitor, 1 video printer)
Alarm Inputs	4, normally open dry contact
Alarm Output	1, normally open, latching, Form A

## MECHANICAL

Connectors	
Alarm Inputs	4 pairs, push-in
Alarm Output	1 pair of relay contacts, push-in
Camera Inputs	4, BNC
Monitor Output	1, RCA phono (BNC adapter supplied)
Video Printer Output	1, RCA phono (BNC adapter supplied)

## GENERAL

Operating Temperature	41° to 104°F (5° to 40°C).
Relative Humidity	Maximum 80%, non-condensing
Dimensions	2.8" H x 10.5" W x 14.6" D (7 x 27 x 37 cm)
Unit Weight	7 lb (3.18 kg)
Shipping Weight	9 lb (4.08 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B



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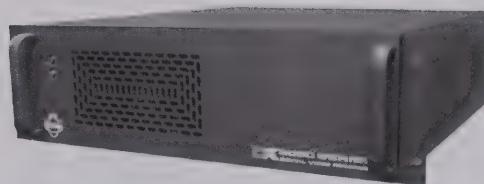


## DX2000 Series Digital Video Recorder

8/16 CAMERA INPUTS, 80-640 GB HARD DRIVE SPACE

### Product Features

- Transaction-Based Data and Video Recording
- Embedded Operating System for Maximum Reliability
- Full-Duplex Operation
- Cost-Saving, Web-Based, Remote Interface (only) for All Functions
- TCP/IP or PSTN Compatible
- 8 or 16 Camera Inputs
- 80/160/320/480/640 GB Hard Disk for Video Storage
- Up to 180 Days Scheduled, Motion, ATM, or Point-Of-Sale (POS) Terminal Recording (Depending on Model)\*\* (see note on back)
- Very Flexible Record Setup to Accommodate the Most Demanding Schedule
- Time/Date, Transaction Number, or Text Data Search



- Easy P/T/Z Control Via Coaxitron with Intuitive Interface
- 8/16 Alarm Inputs and 2 Relay Outputs
- 1 Analog Switching Video Output
- Desktop, Wall, or Rack Installation

The **DX2000 Series** Digital Video Recorder (DVR) ushers in a new era of flexibility and integration. Built for users who demand an easy-to-operate, yet innovative DVR for their remote sites, the **DX2000** offers all the options at an affordable price.

A major concern of analog-based storage technology (used in VCRs) is the need for on-site personnel to constantly change recording media. Pelco's **DX2000 Series** DVR is the perfect storage solution for unattended recording. Phenomenal compression technology and flexible, internal storage capacity alleviate the need for on-site personnel and external storage devices.

In addition to traditional concerns, today's users in many industries demand an additional level of integration from their DVRs with regard to ATMs, POS terminals, and other devices. \*\* (see note on back)

The **DX2000 Series** DVR can record video based on scheduled settings in continuous, motion detection, or alarm modes. It can also be connected to a maximum of 16 serial devices such as cash registers or ATMs for recording data along with the video. Not only is the data recorded and electronically associated with the video, but due to live monitoring of data by the system, most video recording parameters can be changed depending on the data received. For example, the **DX2000 Series** DVR can speed up recording for certain types of data transactions that are designated as exceptions.

Since most applications do not require local, labor intensive supervision, the **DX2000 Series** DVR was engineered for complete remote operation utilizing TCP/IP network (LAN/WAN/Internet) or PSTN phone line connections. The system is operated or programmed (depending on password level) through the Web browser interface installed on your PC. The PC can be positioned in close proximity to the **DX2000** or located halfway around the world.

Programming mode allows the setting of all system parameters; for example, naming cameras, recording schedules, setting alarms, and controlling image quality. Live mode allows live data transaction and camera viewing and PTZ control independent of recording. Playback mode allows for searches based on time/date data fields such as transaction numbers, keywords, or a combination of both.

Full-duplex operation assures that no video is lost during review. A wide variety of hard drive options allows for maximum flexibility at the most affordable price.

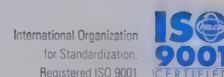
VIDEO RECORDERS  
DX2000 SERIES DVR



DataFAX  
SPEC: 2690

MANUAL: Not Available through DataFAX

C690 / REVISED 9-03



## MODELS

No. of Inputs/ Base Model	Hard Drive Storage Capacity (GB)					Example: <b>DX2008-080</b> 8 inputs, 80 GB HDD storage
	80	160	320	480	640	
(8 inputs) DX2008-	080	160	320	480	640	
(16 inputs) DX2016-	080	160	320	480	640	

### Supplied Accessories:

Rack ear kit and two power cables (United States and Europe)

### Minimum PC Requirements for Remote Site Software:

Pentium®III processor, 800 MHz, 128 MB RAM; 1024 x 768 display resolution; 24-bit color display; video card with 16 or more megabytes of RAM; Windows® 2000, NT 4.0 (SP6), XP, ME; Internet Explorer 5.5 or higher; Ethernet-compatible network card (10/100 preferred).

## ELECTRICAL/VIDEO

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	200W maximum
Video Standards	NTSC/PAL switchable
Image Size	720 x 240 (NTSC and PAL)
Compression Algorithm	Wavelet
Compressed Image Size	5-33 kB, 12 kB average
Max. Recording Speed	16 images/sec
Max. Transmission Speed	16 images/sec
Video Inputs	8 or 16, depending on model
Video Outputs	1 analog
Alarm Inputs	8 or 16, screw terminal
Communication Protocols	LAN, WAN, TCP/IP, PSTN
Pan/Tilt/Zoom Control	Coaxitron (16- or 32-bit)
Relay Contact Ratings	
Rated (Resistive) Load	0.3A at 125 VAC or 1A at 30 VDC

## MECHANICAL

### Connectors

Video Inputs	8 or 16 BNC (looping)
Alarm Inputs	8 or 16, screw terminal; N.O., N.C., or supervised
Relay Outputs	2 (N.O. and/or N.C.)
Video Outputs	1 (switching)
TCP/IP port	RJ-45, 10/100
Data interface	Port No.      Optional Devices
	1, 2              Data adapter*, PIM, SNA
	3, 4              Data adapter*, PIM, RS-422

## GENERAL

Operating Temperature	41° to 104°F (5° to 40°C)
Relative HumidityMaximum	80%, non-condensing
Desktop Dimensions	5.5" H x 17.0" W x 19.6" D (includes rubber feet) (14.0 x 43.2 x 49.8 cm)
Rack Dimensions	5.25" H x 19.0" W x 19.6" D (3 RUs) (13.5 x 48.3 x 49.8 cm)
Unit Weight (Approx.)	Unit                      Shipping
DX2008-080, DX2016-080	26.5 lb (12.0 kg)      34 lb (15.4 kg)
DX2008-160, DX2016-160	26.5 lb (12.0 kg)      34 lb (15.4 kg)
DX2008-320, DX2016-320	28.0 lb (12.7 kg)      35 lb (15.9 kg)
DX2008-480, DX2016-480	29.5 lb (13.4 kg)      37 lb (16.8 kg)
DX2008-640, DX2016-640	31.0 lb (14.1 kg)      38 lb (17.2 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## OPTIONAL ACCESSORIES

DX2000DH	Data hub; provides local connection to 7 serial devices at distances of 4,000 feet (1,219 m) from the DX2000
DX7000EM	56K external analog modem. Full- or half-duplex on 2-wire phone lines; demand-driven high-speed turnaround in HST mode; symmetrical speeds in V.32 bis
DX2000DA9*	RS-232 data adapter; connects directly to serial device's communications port
DX2000DA9T*	RS-232 data adapter; DB-9 T-connector
DX2000DA25T*	RS-232 and SNA data adapter; DB-25 T-connector, 25-foot (7.6 m) cable supplied
ICI1000PIM	Data adapter; connects to POS devices that do not have a serial communications port

\* Use only approved devices from the Optional Accessories list. Data adapters are required for RS-232 connection. Maximum cable length with a data adapter is 150 feet (45.7 m). For longer distances, use the DX2000DH data hub.

\*\* Contact factory for interface information.



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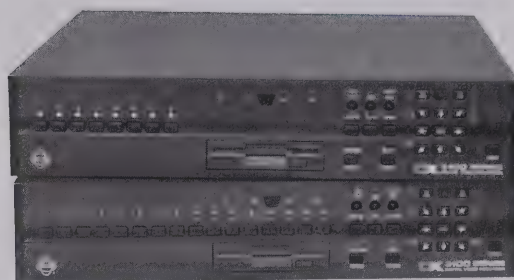


# DX3100 Series Digital Video Recorder

8/16 CAMERA INPUTS, 60/120/240 GB HARD DRIVE

## PRODUCT FEATURES

- 8/16-Channel Full-Duplex DVR
- Up to 640 x 240 Recording Resolution Means Extremely High Image Quality
- Embedded Operating System for Maximum Reliability
- Full TCP/IP Remote Interface
- Remote Interface Allows Simultaneous Connection to Multiple DX3100 Units
- Up to 240 GB Hard Drive Space Allows for Months of Recording
- Daily Recording Schedule and Built-in Video Motion Detection Provides Maximum Utilization of Hard Disk Drives
- Local or Remote PTZ Control via Pelco D or P Protocol
- 4 Alarm Inputs and 2 Relay Outputs



The **DX3100 Series** Digital Video Recorder offers maximum performance and reliability through its embedded operating system.

With a maximum recording speed of up to 30 images per second, built-in multiplexer and PTZ functions, the **DX3100 Series** DVR replaces traditional analog Multiplexer/VCR combinations in both price and performance.

A complete set of front-panel controls and handheld infrared (IR) controller complement the equally functional remote software. During live viewing, the customer can select single, quad, 3 x 3 or even 4 x 4 displays to keep informed of all activities.

The PTZ Control Mode is accessible from the front panel via a single button for intuitive operation of positioning systems such as Spectra III™ or Esprit®. Functions such as pan/tilt/zoom are easily accessed via dedicated directional buttons. Any or all of the cameras can be controllable, and a special setup feature allows the receiver addresses to be individually set between 1 and 99 for each camera.

The Playback Mode, again accessed by a single button on the front panel, provides an easy-to-use and intuitive interface. It prompts the user to input the time and date he would like to review and goes straight to that date for immediate review.

Single-camera playback is easily switched to any camera via the individual camera buttons. Additional features such as fast forward, rewind, and image-by-image playback make finding any image a snap.

Virtually every function accessible from the front panel is also operational from the included IR controller. This handheld unit, similar to a TV remote, allows functions to be controlled from across the room. An optional external IR receiver can be connected to the back of the **DX3100**, which allows the unit to be mounted in a different room up to 50 feet away and still be controlled by the IR remote. Multiple **DX3100** units mounted in close proximity can be controlled from a single remote by using the ID per Recorder and ID Quick-Change features of the IR remote.

The most powerful remote software in the industry allows full access to the operation of each **DX3100** and can simultaneously connect up to 16 **DX3100** DVRs via a network. The remote operator is able to view, for example, the front entrance cameras from 16 different buildings around the world simultaneously. Individual live images and/or playback function is supported as well to allow an operator live viewing of some cameras while simultaneously reviewing recorded video from others.

VIDEO RECORDERS,  
DX3100 SERIES DVM



**DataFAX**  
**SPEC: 2695**  
**MANUAL: Not Available through DataFAX**

C695 / REVISED 9-03



International Organization  
for Standardization  
Registered ISO 9001





## MODELS

Model Number	No. of Camera Inputs	Total HDD Space
DX3108-060	8	60
DX3108-120	8	120
DX3108-240	8	240
DX3116-060	16	60
DX3116-120	16	120
DX3116-240	16	240

### Supplied Accessories:

Rack Ears; Rubber Feet; Remote Site Software CD; IR Remote Controller; DB15 to 8-BNC Cables for DX3116; RS-232C to RS-422/485 Converter

### Minimum PC Requirements for Remote Site Software:

Pentium® III Processor, 800 MHz, 128 MB RAM, 1024x768 display resolution, 32-bit color (16 MB), DirectX® capable preferred, Windows® 98 SE/ME/NT 4.05 & 6/2000/XP



**DX3100 IR  
REMOTE  
CONTROLLER  
(SUPPLIED)**

## ELECTRICAL/VIDEO

Input Voltage	115/230 VAC switchable, 50/60 Hz
Power Consumption	60W maximum
Signal System	NTSC/PAL switchable
Image Size	352 x 240 and 640 x 240, selectable (NTSC or PAL)
Compression	Enhanced MPEG
Byte Size per Image	Average 3-5 kB, Maximum 8 kB
352x240	Average 6-10 kB, Maximum 12 kB
640x240	8 or 16, depending on model
Video Inputs	1 Analog composite video (monitor output)
Video Outputs	8 BNC outputs for DX3108 models; 16 for DX3116 models, via (2) DB-15 to 8-BNC cables
Looping Video Outputs	4
Alarm Inputs	2
Relay Outputs	RS-422 interface to receivers
PTZ Control	LAN, WAN, or Internet-based on TCP/IP
Remote Connection	

## MECHANICAL

### Connectors

BNC  
Screw Terminals  
15-pin, D-Type  
9-pin, D-Type  
RJ-45  
Stereo Mini DIN

Video inputs, looping video outputs (DX3108 only), monitor output  
Alarm inputs, relay outputs  
Looping video (DX3116 only)  
Com 1 and 2  
10/100 Base-TX Ethernet  
External IR receiver

## GENERAL

Operating Temperature  
Storage Temperature  
Relative Humidity  
Dimensions

41° to 104°F (5° to 40°C)  
-4° to 149° F (-20° to 65°C)  
Maximum 80%, non-condensing  
3.5" H x 17.3" W x 18.3" D  
(8.8 x 44.0 x 46.5 cm)  
Fits 19-inch EIA Standard rack (2 RUs); rack ears supplied for mounting.

### Mounting

Weight  
60/120 GB Model  
240 GB Models

Unit Shipping  
23.5 lb (10.67 kg) 35 lb (15.9 kg)  
25.0 lb (11.33 kg) 36 lb (16.3 kg)

## CERTIFICATIONS/RATINGS

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## OPTIONAL ACCESSORIES

### DX3100IRREC

External infrared receiver for IR Remote Controller. 1.6" H x 1.1" W x 0.7" D (4.0 x 2.8 x 1.8 cm). Extends operating distance of remote to 50 feet (15.2 m).



**DX3100 IRREC  
EXTERNAL RECEIVER  
(OPTIONAL)**



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## DX7100 Series Digital Video Recorder

8/16 CAMERA INPUTS, 120-480 GB HARD DRIVE

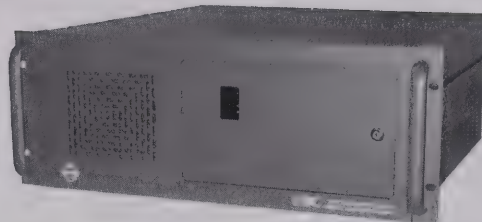
### PRODUCT FEATURES

- Multiple Camera Displays for Live Viewing or Playback While Recording
- Continuous, Motion Detection, Alarm, Pre-Alarm, and Scheduled Recording Modes
- High-Speed Searching (Date, Time, and Alarm)
- Playback by Date, Time, and Camera
- 8 Alarm Inputs and 8 Control Outputs
- Hardware Watchdog
- Recognition of Image Alteration
- Camera Pan/Tilt/Zoom Control Via RS-422
- Remote Viewing, Access, and Control Via PSTN, and TCP/IP (LAN/WAN/INTERNET)
- Built-in CD-RW Drive

Pelco's **DX7100 Series** Digital Video Recorder (DVR) has built-in video motion detection, alarm-based recording, and relay output controls. Models range from an eight-channel, single 120 GB HDD to a sixteen-channel unit with 480 GB.

Record and display images from one, four, nine or sixteen camera inputs to a single SVGA monitor. Operate pan/tilt/zoom functions on controllable cameras such as Pelco's Spectra® and Esprit® Series. The DVR also features remote site access (through software), individual remote site settings, and multiple password levels.

The **DX7100 Series** DVR's recording features make it easy to customize a recording schedule. Continuous, motion, and/or sensor detection can be programmed using up to 24 available group schedules. Eight alarm inputs are available to trigger alarm recording when a signal is received from a connected device. This input will tell the unit to start recording, or if it is already recording, to record at a higher speed. A pre-alarm recording function can be set to record images before the alarm sensor detects disturbances.



- Windows® 2000
- CMS Central Management Software (Optional)
  - Connect to a Maximum of 100, 8- or 16-Channel DX7100 DVRs
  - Display Cameras from Different Sites on One Screen
  - Observe up to Forty-eight Cameras at the Same Time
  - Motion, Sensor, and Site Connection Logs

Each camera can be programmed to detect motion, including the capability to select up to 10 motion detection areas (per camera) and motion sensitivity.

Versatile high-speed search operations include time and date searching, index searching, skip searching, and alarm list searching.

Included with the **DX7100** is the **DX7100RX** single site connection software. The software allows remote site viewing of live and recorded video of a single connected **DX7100** site. Up to one hundred IP addresses and/or phone numbers can be registered for easy site connection. Software features include search, PTZ, and relay capabilities.

Optional multiple site connection software is also available. The **CMS** Central Management Software can simultaneously connect to one hundred, eight- or sixteen-channel **DX7100** digital video recorders. Each camera can be individually programmed to display in live or playback mode. This feature allows the user to view live video and search multiple sites at the same time. Other features include event logging, PTZ, and relay capabilities.

VIDEO RECORDERS  
DX7100 SERIES DVR



DataFAX  
SPEC: 2641

MANUAL: Not Available through DataFAX

C641 / REVISED 11-03



International Organization  
for Standardization  
Registered ISO 9001



## ELECTRICAL/VIDEO/AUDIO

Input Voltage (Power Supply)	100-240 VAC switchable, 50/60 Hz, 210 watts
Signal System	NTSC/PAL
CPU and RAM	
DX7108	Celeron, 256 MB
DX7116	PIII, 256 MB
Image Size	
NTSC	320 x 240
PAL	352 x 288
Compression	M-JPEG
Video Inputs	8 or 16, depending on model
Video Outputs	2 (1 SVGA, 1 analog)
Alarm Inputs	8
Control Output	8
Remote Control	Full remote control via PSTN, ISDN, TCP/IP
Pan/Tilt/Zoom Control	RS-422 interface to receivers

## MECHANICAL

CDRW (Internal)	
Data Transfer Rate	Write: 52X (7.8 MB per second) Rewrite: 24X (3.6 MB per second) Read: 52X maximum (7.2 MB per second)
Video Playback (VCD)	32X maximum (6 MB per second)
Connectors	
BNC	Video inputs
6-pin MiniDIN	PS/2 mouse and keyboard
Push-in	Alarm inputs, control outputs
9-pin D-type	COM 1 and 2
15-pin D-type	SVGA monitor port
25-pin D-type	Printer port
BNC	Analog or CCTV monitor
RJ-45	TCP/IP, LAN/WAN
USB	Two ports available for external backup device

## GENERAL

Operating Temperature	50° to 95°F (10° to 35°C)
Relative Humidity	Maximum 80%, non-condensing
Dimensions	7" H x 17" W x 18" D (4 RUs) (17.78 x 43.18 x 45.72 cm)

Unit Weight (Approximate)	Unit	Shipping
DX7108-120, DX7116-120	39.2 lb (17.8 kg)	50 lb (22.7 kg)
DX7108-240, DX7116-240	43.2 lb (19.6 kg)	54 lb (24.4 kg)
DX7108-360, DX7116-360	47.2 lb (21.4 kg)	58 lb (26.3 kg)
DX7108-480, DX7116-480	51.2 lb (23.2 kg)	62 lb (28.1 kg)

## CERTIFICATIONS

- CE, Class B
- UL Listed
- cUL Listed to Canadian safety standards
- FCC, Class B

## RECOMMENDED PC REQUIREMENTS

### DX7100RX (Supplied)

CPU	Pentium® III processor, 700 MHz
RAM	128 MB
HDD Space	10 MB Free Space
O/S	Windows® 98, Windows 2000, Windows XP, and Windows NT® 4.0 (SP6)
Acceleration	DirectX® 7.0 or Higher
Monitor	15-inch or higher
Image Size	1024 x 768 as a minimum
Color	True color (32 bit)
Approved VGA Card List*	ATI Rage™ 128, ATI Rage 128Pro, NVIDIA™ RIVA TNT2™ Model 64, NVIDIA RIVA TNT2 Model 64 Pro, NVIDIA GE Force™2 MX400, Savage4, or Savage4 Pro

### CMS (Optional)

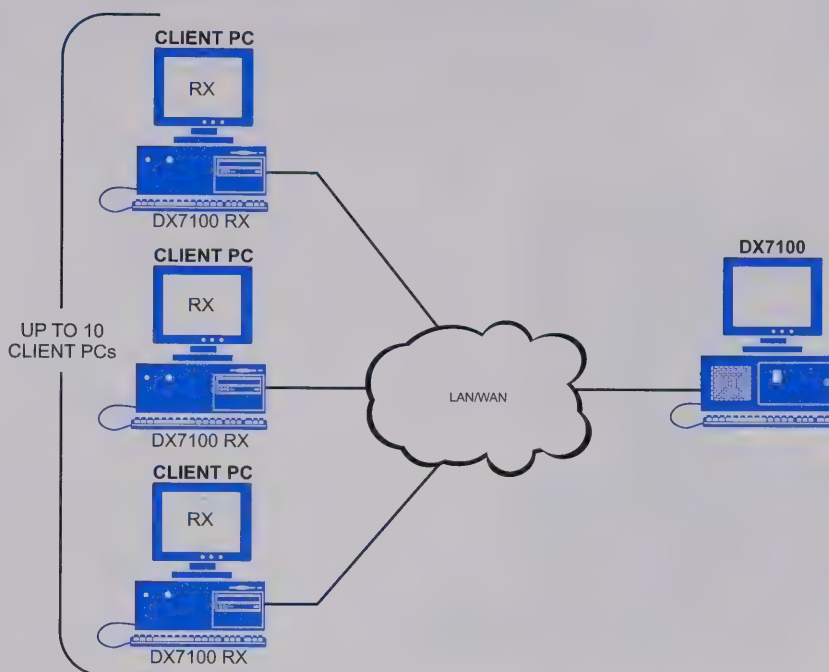
CPU	Up to 48 sites Pentium IV 1.2 GHz or higher Up to 100 sites Pentium IV 1.6 GHz or higher
RAM	256 MB or higher
NIC	10/100
HDD Space	50 MB free space
O/S	Windows 2000 Professional (SP2), and Windows XP Professional
Acceleration	DirectX 7.0 or higher
Monitor1	7-inch or higher
Image Size	1280 x 1024 as a minimum
Color	True color (32 bit) as a minimum
Approved VGA Card List	GeForce2 MX400 32 MB, GeForce4 MX440 32 MB, ATI RADEON™ 7000 64 MB, and ATI RADEON 7500 64 MB

\*All recommended VGA cards should have a minimum of 16 MB of video RAM, 32 MB is preferred.



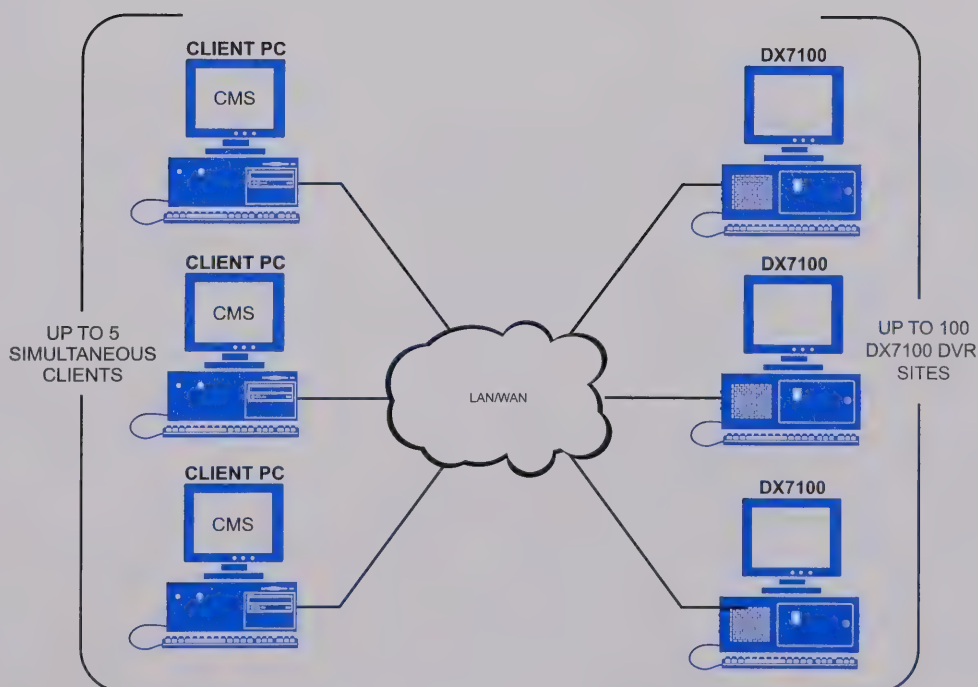
## DX7100RX Single Site Connection Software (Supplied)

- Connect to one hundred sites – one at a time
- Live view mode
- Search video mode
- IP address and/or phone number connections
- 1, 4, 9, or 16 display options



## CMS Multiple Site Connection Software

- Connect to one hundred sites simultaneously
- Live view and search video at same time
- Search multiple sites at the same time
- Live scheduling
- Event logging
- Motion and sensor screen display
- IP address
- 1, 4, 9, 16, 25, or 48 display options



## MODELS

Model Number	No. of Camera Inputs	Total HDD Space
DX7108-120	8	120
DX7108-240	8	240
DX7108-360	8	360
DX7108-480	8	480
DX7116-120	16	120
DX7116-240	16	240
DX7116-360	16	360
DX7116-480	16	480

**Supplied Accessories:** Keyboard, PS/2 mouse, RS-422 converter, Windows® 2000, DX7100RX remote site software, and rack ears. (Monitor not supplied with DX7100 Series DVR.)

## OPTIONAL ACCESSORIES

### CMS

Central management software can simultaneously connect to a maximum of one hundred, sixteen-channel DX7100 digital video recorders.

Indicates change or addition.



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## DX8000 Series Digital Video Recorder

8/16 CAMERA INPUTS, 80 GB-1 TB STORAGE, ADVANCED SEARCH CAPABILITIES

### PRODUCT FEATURES

- Up to 720 x 480 Recording Resolution
- Up to 480 Images Per Second (IPS) Recording Rate at CIF Resolution
- Up to 16 Camera Inputs and Outputs with Auto Termination
- Maximum Internal Storage Capacity of 1 TB
- Multiple Displays for Live Viewing or Playback While Recording
- Continuous, Motion Detection, Alarm, and Scheduled Recording
- Ability to Connect Multiple DX8000s Together
- Ability to Support Five Simultaneous Clients
- Network Bandwidth Throttling
- Digital Zoom on Playback
- Pre-Motion and Pre-Alarm Recording
- On-Screen PTZ Control with Dome Programming Capability
- Includes Remote PC, Web, and Handheld Client Software
- Proprietary Compression Technology Offering High-Quality and Small File Sizes
- Built-in Protection Against Hackers, Viruses, and D.O.S. Attacks



(MONITOR IS NOT SUPPLIED)

The **DX8000 Series** Digital Video Recorder (DVR) represents the next generation of high-performance, PC-based digital video recorders. It is designed for those users who demand an easy-to-operate, yet innovative DVR. The **DX8000** features built-in video motion detection, alarm-based recording, and relay output controls. Models range from an eight-channel, single 80 GB HDD unit to a sixteen-channel unit with up to 1 TB of storage.

Fully implemented networking capabilities allow remote administration, playback, and export using the included PC client application. Live viewing is supported on a variety of client platforms, including Internet browsers and Pocket PC™-compatible handheld devices.

Versatile high-speed search operations include time and date, event list, thumbnail, and intelligent pixel searching. Extensive scheduling features allow customizing of weekday, weekend, and special event recording.

The **DX8000** offers users a highly intuitive and ergonomically designed interface that provides simple and efficient access to all setup and operations functions. Manual and unattended backup can be done to a number of optical, magnetic, and network-attached media options.

Overall, the **DX8000** combines a feature-rich security platform with a flexible and intuitive user interface offering an unprecedented level of functionality.



DataFAX  
SPEC: 2623

MANUAL: Not Available through DataFAX

C623 / NEW 12-03



International Organization  
for Standardization  
Registered ISO 9001

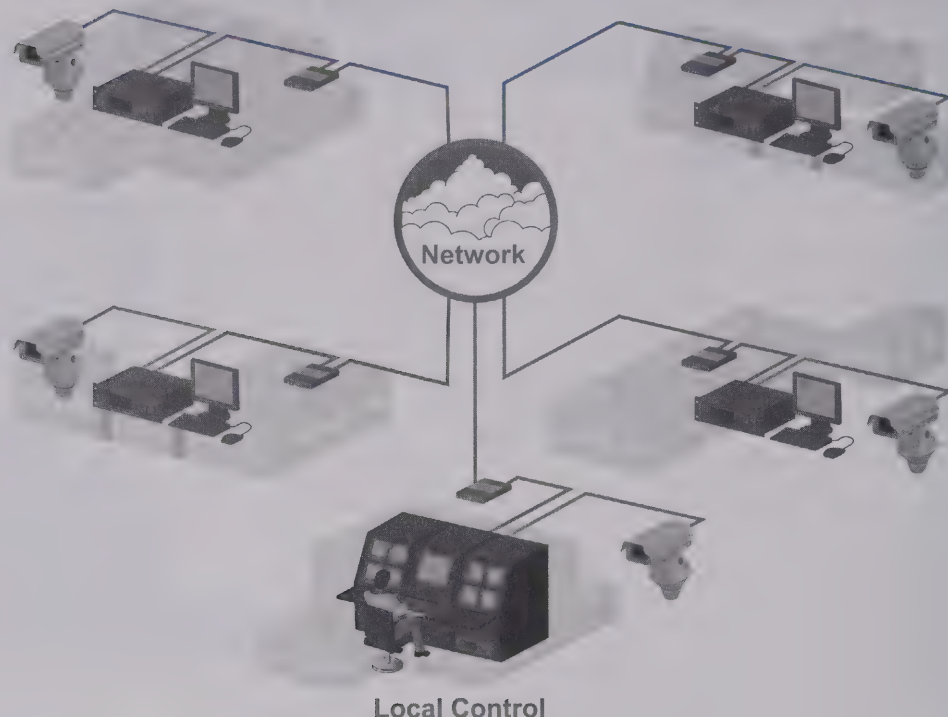


VIDEO RECORDERS  
DX8000 SERIES DVR



## APPLICATIONS

- Connect up to five sites simultaneously
- View live, playback, and search video
- Display 1, 4, 9, or 16 cameras simultaneously
- Control and configure sites remotely



## ADDITIONAL FEATURES

- Local and Remote Administration
- Local and Remote Live, Search, and Playback Viewing
- Individual Camera Channel Configuration
- Display of Cameras from Different Sites on One Screen
- Dynamically Adjustable Frame Rate and Image Quality for Motion and Alarm Recording
- Dynamically Adjustable Frame Rate and Image Quality for Pre-Motion and Pre-Alarm Recording
- Pre-Alarm Recording up to 60 Seconds (up to 15 Minutes with Optional 256 MB RAM Upgrade)
- Monitor System Changes Using Activity Logs
- User-Friendly and Highly Intuitive Graphical User Interface
- Local and Remote Software Upgrade Capabilities
- Multilevel Password and User Configuration
- Automatic Image Watermarking
- Multilanguage Support (English, German, French, Italian, Portuguese, and Spanish)
- User-Definable PTZ Presets, Patterns, and Preset Tours
- Display up to 16 Local and Remote Cameras on a Single Screen
- Print Still Images from Video
- Export Video in Multiple Formats, Including DX8000 Native, AVI, ASF, BMP, TIFF, and JPEG
- Open Source API Facilitates Development and Integration of Third-Party Applications
- Ability to Configure Any Number of Camera Channels for Covert Mode

## SECURITY

The DX8000 incorporates a number of vigorous security measures to insure system integrity and safeguard data. Using Microsoft® Windows® lockdown features, disk volumes and system registry files are protected from deletion or modification. Access to operating system resources and services such as Network Neighborhood are tightly controlled or prohibited. Maximum protection is provided against external threats from hackers, viruses, and Denial of Service attacks. Finally, strong encryption and authentication algorithms such as NTLMv2 and MD5 Hash cryptography round out a proactively secure computing platform.

# TECHNICAL SPECIFICATIONS

## TECHNICAL SPECIFICATIONS

### Electrical/Video

Input Voltage	90-240 VAC, 50/60 Hz, auto-ranging
Signal System	NTSC/PAL
Operating System	Windows® 2000 and Service Pack 4
Recording Resolutions	NTSC PAL
	320 x 240 352 x 288
	640 x 240 704 x 288
	640 x 480 704 x 576
	720 x 240 720 x 288
	720 x 480 720 x 576
Compression	Pelco proprietary
Video Inputs	8/16 (looping with automatic termination)
VGA Outputs	1
S-Video Output	1
Programmable Analog	
Video Output (Optional)	2
Remote Administration	Full remote control via TCP/IP network
Total Recording Rate	Up to 480 images per second

### Mechanical

Connectors	
BNC	Video inputs and outputs
6-pin mini-DIN	PS/2 mouse and keyboard
DB9	COM 1 and COM 2 (disabled)
DB15	Monitor port (SVGA)
RJ-45	Ethernet port (100 BaseT) and RS-485/RS-422 ports
S-Video (from VGA card)	Analog monitor output (disabled)
USB	Six USB 2.0 ports (2 front, 4 rear)

### General

Environmental:	
Operating Temperature	50° to 95°F (10° to 35°C)
Relative Humidity	Maximum 80%, non-condensing

Dimensions	
Desktop	7.0 (H) x 17 (W) x 19.9 (D) inches (17.78 x 43.18 x 50.55 cm)
Rack Mount	7.0 (H) x 19.0 (W) x 22 (D) inches (17.78 x 48.26 x 55.88 cm)

Unit Weight (Approximate)	Unit	Shipping
DX8008-080	39.1 lb (17.8 kg)	51.0 lb (23.2 kg)
DX8008-250	39.1 lb (17.8 kg)	51.0 lb (23.2 kg)
DX8008-500	40.5 lb (18.4 kg)	52.4 lb (23.8 kg)
DX8008-750	41.9 lb (19.0 kg)	53.8 lb (24.4 kg)
DX8008-1000	43.2 lb (19.6 kg)	55.1 lb (25.0 kg)
DX8016-080	39.7 lb (18.0 kg)	51.8 lb (23.5 kg)
DX8016-250	39.7 lb (18.0 kg)	51.8 lb (23.5 kg)
DX8016-500	41.1 lb (18.6 kg)	53.2 lb (24.1 kg)
DX8016-750	42.5 lb (19.3 kg)	54.6 lb (24.7 kg)
DX8016-1000	43.8 lb (19.9 kg)	55.9 lb (25.4 kg)

## CERTIFICATIONS

- CE
- FCC, Class A

At the time of this printing, all other certifications are pending. Please consult the factory, our website ([www.pelco.com](http://www.pelco.com)), or the most recent B.O.S.S.® update for the current status of certifications.

## REMOTE PC CLIENT APPLICATION

### Recommended PC Requirements

Processor	Intel® Pentium® III, Pentium 4 with 800 MHz minimum processor speed
Memory	128 MB RAM
Video	AGP VGA card with minimum 64 MB video RAM (nonshared memory), 1024 x 768 display resolution, and DirectX® 8.1 application programming interface.
Recommendations	
Monitor	SVGA or XGA with 1024 x 768 resolution
Operating system	Windows 2000 (SP4) or Windows XP DirectX 8.1 or better Microsoft Internet Explorer 5.5 or later 500 MB free disk space
Mobile PDA Client Application	A PocketPC™ with Microsoft PPC 2002 or higher and minimum 64 MB of memory

## MODELS

Model Number	No. of Camera Inputs	Total HDD Space (GB)	Optical Drive
DX8008-080	8	80	CD-RW
DX8008-250	8	250	CD-RW
DX8008-500	8	500	CD-RW
DX8008-750	8	750	CD-RW
DX8008-1000	8	1000	CD-RW
DX8016-080	16	80	CD-RW
DX8016-250	16	250	CD-RW
DX8016-500	16	500	CD-RW
DX8016-750	16	750	CD-RW
DX8016-1000	16	1000	CD-RW
DX8008-080DVD	8	80	DVD-RW
DX8008-250DVD	8	250	DVD-RW
DX8008-500DVD	8	500	DVD-RW
DX8008-750DVD	8	750	DVD-RW
DX8008-1000DVD	8	1000	DVD-RW
DX8016-080DVD	16	80	DVD-RW
DX8016-250DVD	16	250	DVD-RW
DX8016-500DVD	16	500	DVD-RW
DX8016-750DVD	16	750	DVD-RW
DX8016-1000DVD	16	1000	DVD-RW

### Supplied Accessories

Power cords (USA and European), keyboard, PS/2 mouse, DX8000 recovery CD, remote client application CD, audio input breakout cables (optional), alarm and relay terminal blocks, rack ears and handles, and rack mounting hardware. (Monitor is not supplied with DX8000 Series DVR.)

### Optional Accessories

DX8000-UP250	250 GB hard drive upgrade kit
DX8000-DVD	DVD-RW upgrade
DX8000-AUD	8-channel audio card
DX8000-M08	8-channel programmable analog output display card
DX8000-M016	16-channel programmable analog output display card
DX8000-ISC1	Internal Ultra 160 SCSI card
DX8000-RAM256	Memory upgrade from 256 MB to 512 MB



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## DX9100 Series Digital Video Recorder

### 16 CAMERA INPUTS, 500-1500 GB HARD DRIVE

#### PRODUCT FEATURES

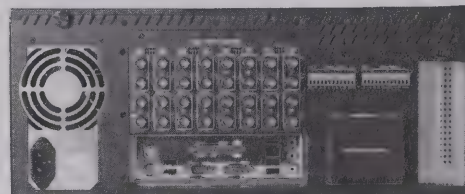
- Compatible with Existing DX9000 Recorders When Using DX9100VS Viewstations
- 16 Looping Video Inputs
- 16 Alarm Inputs and 2 Relay Outputs
- Can Be Integrated with Pelco's CM6800/CM9740/CM9760 Matrix Switchers for Alarm and Relay Communication
- Instantaneous Playback of All Recorded Images
- Built-in Digital Motion Detection with Masking and Sensitivity Adjustments
- Continuous, Scheduled, or Event-Based Recording
- Easy Playback and Forward/Reverse Search
- Complete Audit Trail Database, with Six-Month History, That Tracks Who Did What, Where, and When
- DVR Management Capability Providing Automatic Video Routing to a Back-Up Spare Recorder in Case of Failure
- Viewstation Language Support for English, French, German, Italian, Polish, Portuguese, Russian, Simplified Chinese, and Spanish

The **DX9100 Series** digital video recorder (DVR) is a recording system that can record up to 16 channels of video and store information on its internal storage unit. Thousands of cameras can be recorded and viewed at the same time when multiple **DX9100** recorders and **DX9100** viewstations are linked to each other through a local area network (LAN) or wide area network (WAN).

Recording can be done continuously or based on events (motion detection or alarms). Recording based on internal video motion detection or on an alarm condition minimizes hard disk storage requirements. If continuous recording is selected, the motion detection feature can still be used as motion events are simply marked within the recording for easy retrieval. Continuous recording or event-based recording can be programmed individually for each camera with daily schedules for maximum flexibility.



DX9116-F-1500 RECORDER FRONT VIEW



DX9116-F-1500 RECORDER BACK VIEW

**DX9100VS** viewstations can be distributed on the system's network to accommodate viewing of live or recorded video. These stations allow simultaneous viewing of live or recorded video, in any combination, from as many as four cameras simultaneously. The user can even watch three recorded streams and a live stream from the same camera while other users on the same network are accessing that same camera.

Because of the low bandwidth requirements on the network, the system can be distributed over many buildings in many different physical locations in different cities or even countries.

*All DX9100 Series systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purpose of information only and does not constitute approval or certification of receiving party. Proof of certification must be provided prior to shipment of DX9100 Systems contained herein.*



**DataFAX**  
SPEC: 2636  
MANUAL: Not Available through DataFAX

C636 / REVISED 1-04



International Organization  
for Standardization  
Registered ISO 9001



VIDEO RECORDERS  
DX9100 SERIES DVR

## RECORDER

### Models

DX9116H-500	Records at 7.5 or 15 images per second (ips) at CIF resolution; 500 GB internal storage
DX9116H-750	Same as the DX9116H-500; except has 750 GB internal storage
DX9116H-1000	Same as the DX9116H-500; except has 1000 GB internal storage
DX9116H-1250	Same as the DX9116H-500; except has 1250 GB internal storage
DX9116H-1500	Same as the DX9116H-500; except has 1500 GB internal storage
DX9116F-500	Records at 7.5, 15, or 30 ips at CIF resolution or at 7.5 or 15 ips at 2CIF resolution; 500 GB internal storage
DX9116F-750	Same as the DX9116F-500; except has 750 GB internal storage
DX9116F-1000	Same as the DX9116F-500; except has 1000 GB internal storage
DX9116F-1250	Same as the DX9116F-500; except has 1250 GB internal storage
DX9116F-1500	Same as the DX9116F-500; except has 1500 GB internal storage

### Electrical/Video

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	235 W maximum
Signal System	NTSC/PAL, auto-sensing
Operating System	Windows® 2000 and SP3 Service Pack
Recording Resolution	
NTSC (DX9100H)	352 x 240 (CIF) at 7.5 or 15 ips
PAL (DX9100H)	352 x 288 (CIF) at 6.25 or 12.5 ips
NTSC (DX9100F)	352 x 240 (CIF) at 7.5, 15, or 30 ips
	704 x 240 (2CIF) at 7.5 or 15 ips
PAL (DX9100F)	352 x 288 (CIF) at 6.25, 12.5, or 25 ips
	704 x 288 (2CIF) at 6.25 or 12.5 ips
Recording Speed	
NTSC (DX9100H)	7.5 or 15 ips
PAL (DX9100H)	6.25 or 12.5 ips
NTSC (DX9100F)	7.5, 15, or 30 ips
PAL (DX9100F)	6.25, 12.5, or 25 ips
HDD Configuration	RAID 0 array
Compression	MPEG-1
Video Inputs	16
Looping Video Outputs	16
Alarm Inputs	16
Relay Outputs	2
Remote Control	Full control via TCP/IP

### Mechanical

Connectors	
BNC	Video inputs
BNC	Looping video outputs
6-pin mini-DIN	PS/2 mouse and keyboard
DB9	One RS-232 COM port available for external devices
DB15	Monitor port (VGA)
DB25	Printer port
RJ-45	Ethernet port (10/100BaseT)
Audio Inputs	Not used
Alarm Inputs	Removeable screw terminal
Relay Outputs	Removeable screw terminal
USB 2.0	Four high-speed ports available

### General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	7.1" H x 17.0" W x 22.1" D (18.1 x 43.0 x 56.2 cm)
Rack-Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight (maximum)	52.2 lb (23.5 kg)

### Certifications

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

### Accessories

- Rack ears
- Rack mount rails

## VIEWSTATION

### Model

DX9100VSR	Rack mountable viewstation
-----------	----------------------------

### Electrical/Video

Input Voltage	100-240 VAC, 50/60 Hz, autoranging
Power Consumption	90 W maximum
Operating System	Windows 2000 and SP2 Service Pack

### Mechanical

Connectors	
6-pin mini-DIN	PS/2 mouse and keyboard
DB9	Two RS-232 COM ports available for external devices
DB15	SVGA monitor port (1024 x 768)
DB15	Composite monitor port (analog adapter provided)
DB25	Printer port
RJ-11I	Internal modem (for use with pcAnywhere™ software only)
RJ-45	Ethernet port (10/100BaseT)
	Ethernet port (10/100/1000BaseT)
USB 2.0	Two high-speed ports available
RCA	Audio output (reserved for future use)
Hardware	
Processor	Pentium® 4, 2.4 GHz
RAM	512 MB DDR
Video card	Matrox Millennium™ G450
Modem	V.90/56K
Drive	CD-RW

### General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	7.0" H x 17.0" W x 19.6" D (17.78 x 43.18 x 49.78 cm)
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight	33 lb (15.0 kg)
Shipping Weight	51 lb (23.1 kg)

### Certifications

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

### Accessories

- Keyboard
- Rack ears
- Mouse
- Rack mount rails

Indicates change or addition.

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[www.pelco.com](http://www.pelco.com)



## DX9200 Series Digital Video Recorder

### UNLIMITED CAMERA INPUTS, UNLIMITED STORAGE

#### Product Features

- Compatible with Existing DX9000 and DX9100 Recorders When Using DX9100VS Viewstations
- Individual Units Accommodate 8, 16, 24, 32, or 40 Camera Inputs up to 30 Images Per Second or 16, 32, or 48 Cameras up to 15 Images per Second
- Can Be Integrated with Pelco CM6800/CM9740/CM9760 Matrix for Alarm and Relay Communciation
- Hot-Swappable HDD RAID Arrays for Video Storage
- Hot-Swappable Power Supplies on Recorder for Increased Protection
- Redundant System Drives in Recorder Configured in RAID 1 Array for Fail-Safe Operation
- Complete Audit Trail Database, with Six Month History, that Tracks Who Did What, Where, and When
- DVR Management Capability Providing Automatic Video Routing to a Back-up Spare Recorder in Case of Failure
- Viewstation Language Support for English, French, German, Italian, Polish, Portuguese, Russian, Simplified Chinese, and Spanish



**DX9200 SERIES SYSTEM  
(VIEWSTATION, RECORDER, STORAGE UNIT)**

The **DX9200 Series** Digital Video Recorder (DVR) is an enterprise class recording system that can store and play back images from any number of cameras at 7.5, 15, or 30 images per second per camera simultaneously. These images are transferred to a number of RAID storage units for safekeeping and can be recalled from Viewstations that are connected to the network.

Recorders can be ordered in various configurations from 8 to 40 cameras for units that record up to 30 images per second and from 16 to 48 cameras for units that record up to 15 images per second. There is no limitation on how many of each type of recorder can be used in any application, allowing for literally thousands of cameras to be recorded simultaneously. Even when using the video motion detection feature, images may be continuously recorded at a preset frame rate and motion events are simply marked within the recording for easy retrieval. Alternatively, the system may be programmed to record only based on internal video motion detection or on an alarm condition to minimize hard disk storage requirements. Continuous recording or event-based recording may be programmed individually for each camera with daily schedules for maximum flexibility.

Video storage units configured independently for each system are available in various sizes to accommodate length of storage requirements. Every system can store weeks or months of video, depending on the number of cameras being recorded, directly on the system's hard drives for instant retrieval and playback.

The storage units use RAID (Redundant Array of Independent Disks) technology. Level 5 or Level 5+1 is available. In Level 5, data is divided between drives in such a way that if one drive fails, the data can be reconstructed from the remaining drives. Level 5+1 is similar to Level 5, but includes a hot spare drive. If a drive fails, the redundant data automatically relocates to the hot spare and begins the reconstruction process without user intervention.

Viewstations can be distributed on the system's network to accommodate viewing of live or recorded video. These stations allow simultaneous viewing of live or recorded video, in any combination, from as many as four cameras simultaneously. The user can even watch three recorded streams and a live stream from the same camera while other users on the same network are accessing that very same camera.

Because of the low bandwidth requirements on the network, the system can be distributed over many buildings in many different physical locations in different cities or even countries.

*All DX9200 Series systems require installation by a Pelco Certified Dealer/Installer. This spec sheet may be used for purpose of information only and does not constitute approval or certification of receiving party. Proof of certification must be provided prior to shipment of DX9200 Systems contained herein.*



**DataFAX**  
**SPEC:** 2634  
**MANUAL:** Not Available through DataFAX

C634 / NEW 10-03



International Organization  
for Standardization  
Registered ISO 9001





## DX9100 SERIES VIEWSTATION



- 7 different access levels for configuring operator functions
- View up to four cameras simultaneously
- View live or recorded video simultaneously
- One SVGA monitor output and one composite output (monitors not included)
- All software installed, including Windows® 2000
- TCP/IP addressable
- Multilanguage support; English (default), French, German, Italian, Polish, Portuguese, Russian, Simplified Chinese, and Spanish

One or more viewstations may be installed on a network. Wherever a viewstation is located, an operator can view live or playback video from any camera on the system.

## DX9200 SERIES RECORDER



- Unlimited number of recorders can be installed
- Depending on model:
  - Connect up to 48 cameras
  - Record up to 7.5, 15, or 30 images per second per camera
- Redundant hot-swappable power supplies
- Redundant system drives configured in RAID 1 array
- Looping video inputs
- TCP/IP addressable

The DX9200 recorder acts as the server for the system. All of the cameras connect to the recorder and the video is digitized, compressed, and sent to the storage unit via SCSI connections. The server is connected to the network and sends all live and playback video to the viewstation upon command.

## DX9200 SERIES VIDEO STORAGE UNIT



- Hot-swappable drives in case of failure
- SCSI interface for faster video transfer
- Consult factory for storage capacity
- Choose from RAID 5 or RAID 5+1 configurations
- Backup power supply and fan module

Depending on how much video you are recording and how long you need to keep it, multiple storage units can be connected to each recorder. RAID technology is used to stripe data across multiple drives. A choice of Level 5 or Level 5+1 configuration is available. Level 5 provides protection in case a drive fails as the missing data can be reconstructed from the data on the other drives. Level 5+1 provides added protection by including a hot spare drive.

## ORDERING INFORMATION

To order a DX9200 system, you must contact Pelco's Digital Support Group at 1-800-289-9100 or 1-559-292-1981 for assistance. Supply Pelco with the following information:

1. The number of cameras and camera types (fixed indoor, fixed outdoor, PTZ, high movement fixed, high movement PTZ) you need at each site. Also specify the resolution required and number of images (7.5, 15, or 30) required per camera. This will determine the number and type of recorders required.

### Recorder Models

DX9208F  
DX9216F  
DX9224F  
DX9232F  
DX9240F  
DX9216H  
DX9232H  
DX9248H

DX9208FH  
DX9200 Series  
Camera Inputs  
F = Maximum 30 images per second per camera  
H = Maximum 15 images per second per camera

2. Specify the length of time that you need to store video data. Storage time can range from a few days to several weeks or months. The time you specify will determine how many video storage units you need for each recorder. This will be calculated by Pelco.

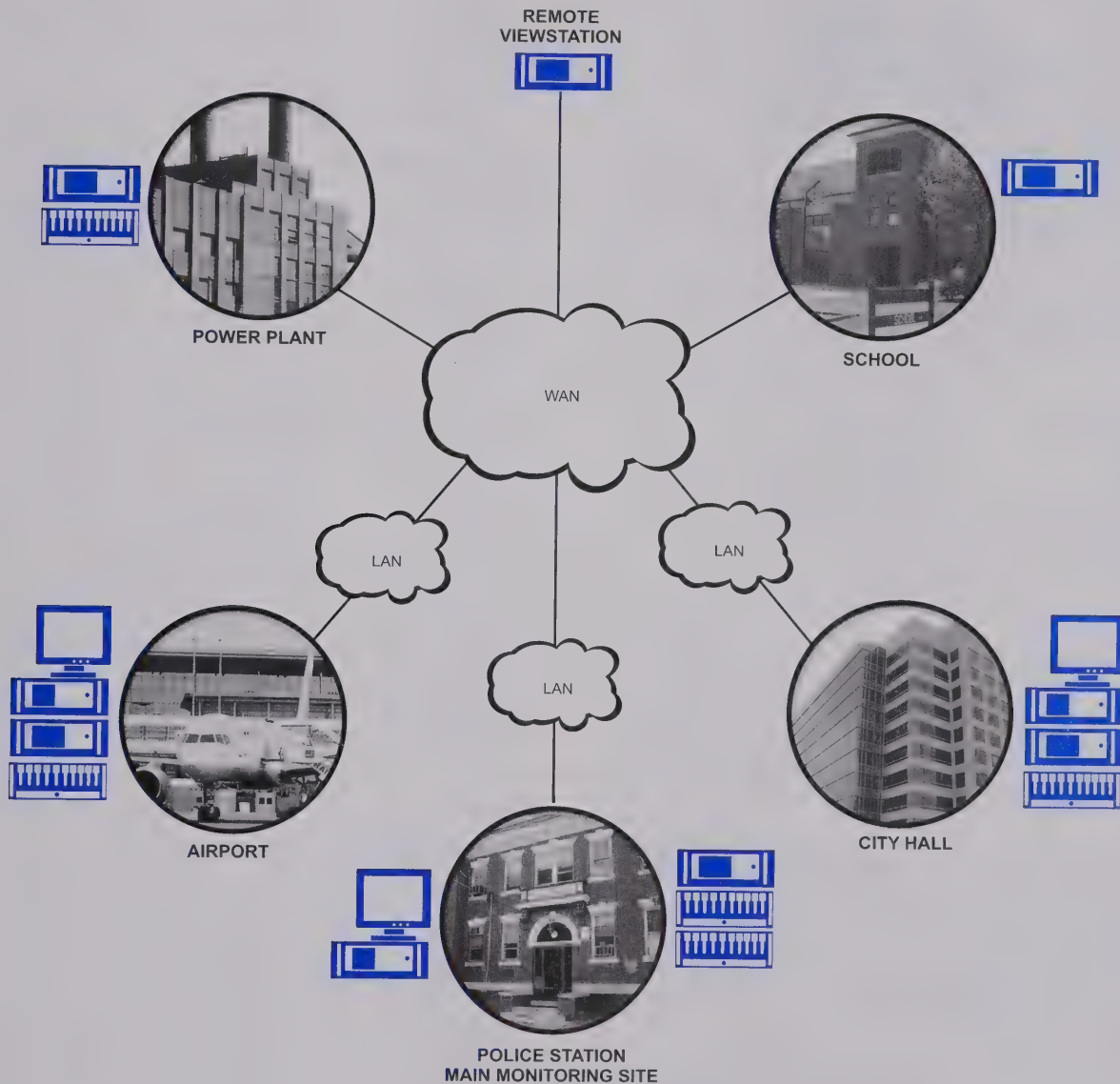
Also, you need to specify whether you want RAID 5 or RAID 5+1 configuration for your system. Level 5+1 is recommended. In level 5 all data and parity blocks are divided between the drives in a storage unit in such a way that if a single drive is removed (or fails), the data on the missing drive can be reconstructed using the data on the remaining drives. In a Level 5+1 configuration, a hot spare drive is included. Therefore, if a single drive is removed (or fails), the redundant data, on the remaining drives, relocates automatically to the hot spare and begins the reconstruction process without user intervention.

3. Determine the number of DX9100VS viewstations that you need. You do not need a viewstation for each recorder. The number of viewstations depends on the number of locations you want for viewing video.

Note: Use uninterruptible power supplies (UPS) for all recorders and storage units.

A local area network (LAN) is required whenever one or more recorders AND one or more viewstations are located at the same site. The recorders and viewstations are linked through a hub that enables the viewstations to communicate with the recorders in the same facility; for example, the police station. The recorders, viewstations, and hub at the same location form a LAN. The hub also has a connection to a wide area network (WAN\*), allowing viewstations at the police station, for example, to monitor what is happening at the other sites, such as the airport or power plant.

When there is only a single recorder or a single viewstation at a site, as at the power plant or school, the equipment is connected directly to the wide area network.



\* When connecting through a WAN, ensure that multicasting is supported for the viewing of live video.

## RECORDER

### Electrical/Video

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	265W maximum, redundant hot-swappable
Signal System	NTSC/PAL, auto-sensing
Operating System	Windows® 2000 and SP3 Service Pack
Recording Resolution	
NTSC (DX9200H)	352 x 240 (CIF) at 7.5 or 15 ips
PAL (DX9200H)	352 x 288 (CIF) at 6.25 or 12.5 ips
NTSC (DX9200F)	352 x 240 (CIF) at 7.5, 15, or 30 ips
	704 x 240 (2CIF) at 7.5 or 15 ips
PAL (DX9200F)	352 x 288 (CIF) at 6.25, 12.5, or 25 ips
	704 x 288 (2CIF) at 6.25 or 12.5 ips
Recording Speed Per Camera	
NTSC (DX9200H)	7.5 or 15 ips
PAL (DX9200H)	6.25 or 12.5 ips
NTSC (DX9200F)	7.5, 15, or 30 ips
PAL (DX9200F)	6.25, 12.5, or 25 ips
Compression	MPEG-1
Video Inputs	16/32/48 maximum 15 ips
	8/16/24/32/40 maximum 30 ips
Video Outputs	1 SVGA
Remote Control	Full remote control via TCP/IP

### Mechanical

Connectors	
BNC	Up to 48 video inputs on patch panel; up to 48 looping video outputs on patch panel
SCSI Interface	Two ports available
DB37	1-6 ports available
DB9	COM 1 and 2
RJ-45	Ethernet port (10/100BASET)
USB 2.0	One high-speed port available
6-pin mini-DIN	PS/2 mouse and keyboard
DB15, SVGA	Monitor port
Audio Inputs	Not used
DIN5	AT keyboard connector (not used)

### General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	7.3" H x 17.0" W x 19.6" D (18.54 x 43.18 x 49.78 cm)
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight (maximum)	53.7 lb (24.4 kg)

### Certifications

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A

### Accessories

- Rack ears and rack-mount rails

## IDE STORAGE UNIT

### Electrical/Video

Input Voltage	90-254 VAC, 50/60 Hz, auto-ranging
Power Consumption	Hot-swappable, redundant power supplies, 600W maximum

### Mechanical

Connectors	
Recorder Interface	SCSI only

### General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 85%, non-condensing
Desktop Dimensions	5.25" H x 17.0" W x 21.2" D (13.3 x 43.18 x 53.85 cm)
Rack Mount Dimensions	5.25" H x 19.0" W x 21.2" D (3 RUs) (13.3 x 48.26 x 53.85 cm)
Unit Weight (maximum)	73.8 lb (33.5 kg)
Shipping Weight	103 lb (46.8 kg)

### Certifications

- CE, Class A
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

### Accessories

- Rack ears and rack-mount rails

## VIEWSTATION

### Electrical/Video

Input Voltage	100-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	90 W maximum
Operating System	Windows 2000 and SP2 Service Pack

### Mechanical

Connectors	
6-pin mini-DIN	PS/2 mouse and keyboard
DB9	Two RS-232 COM ports available for external devices
DB15	SVGA monitor port (1024 x 768)
DB15	Composite monitor port (analog adapter provided)
DB25	Printer port
RJ-11	Internal modem (for use with pcAnywhere™ software only)
RJ-45	Ethernet port (10/100BaseT)
USB 2.0	Ethernet port (10/100/1000BaseT)
RCA	Two high-speed ports available
Hardware	Audio output (reserved for future use)
Processor	Pentium® 4, 2.4 GHz
RAM	512 MB DDR
Video card	Matrox Millennium™ G450
Modem	V.90/56K
Drive	CD-RW

### General

Operating Temperature	41° to 85°F (5° to 29°C)
Relative Humidity	Maximum 80%, non-condensing
Desktop Dimensions	7.0" H x 17.0" W x 19.6" D (17.78 x 43.18 x 49.78 cm)
Rack Mount Dimensions	7.0" H x 19.0" W x 19.6" D (4 RUs) (17.78 x 48.26 x 49.78 cm)
Unit Weight	33 lb (15.0 kg)
Shipping Weight	51 lb (23.1 kg)

### Certifications

- CE, Class B
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

### Accessories

- Keyboard, mouse, rack ears, and rack-mount rails



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# VIDEO4X4 Digital Surveillance System

## DVR RECORDER, QUAD MONITOR AND 4 COLOR CAMERAS

### Product Features

- Digital Video Recorder
  - 30 GB or 60 GB Hard Drive
  - Easy Playback and Forward/Reverse Search
  - Playback by Date, Time, and Camera
  - 4 Alarm Inputs, 1 Alarm Output
- Monitor
  - 14-Inch Color Quad Monitor (NTSC)
  - Single-Camera or Four-Camera Display
  - Camera ID, and Date and Time Displays
  - Video Loss Detection
- Camera
  - Attractive, Compact Color Camera with Integrated Lens and Intercom Microphone
  - Wall/Ceiling Camera Mounting Bracket
  - 60-Foot Video/Audio/Power cable
  - 12 VDC Power for the Camera is Supplied from the Monitor



Pelco's **VIDEO4X4** is an all-in-one video security system that is perfect for commercial and retail applications. The easy-to-install system includes a digital video recorder (DVR), quad monitor, and four color cameras with mounts and cables, all the components required for a fast plug-and-play setup.

The **VIDEO4X4** system's digital video recorder is a compact recorder that can store and play back images from four cameras. The DVR has front panel controls that are easily accessible for operation and programming. Live video from all four cameras can be viewed while recording. Recording can be done continuously or for a scheduled time in a 24-hour period. Search functions during playback allow frame-by-frame viewing, fast playback, and playback of alarm events. The DVR uses password protection to guard against unauthorized or unintentional recording or playback.

The **VIDEO4X4** quad monitor is capable of simultaneous or sequential viewing of four video inputs. The multiple-screen view can be either a quad display or a picture-in-picture (PIP) display. Other features allow you to sequence camera views, zoom in on a camera, and freeze a view on the monitor screen.

The **VIDEO4X4** system's monitor and cameras have built-in microphones and speakers. The audio function allows for the installation of a "call" button near the camera to create an intercom system. Built-in microphones and speakers on the camera and monitor permit the person on camera and the person watching the monitor to communicate verbally with each other.

The **VIDEO4X4** can be configured for either full-screen playback or quad-view playback. The full-screen playback configuration can store up to approximately 2 weeks (4 ips, 30 GB HDD) or 4 weeks (4 ips, 60 GB HDD) of recordings. The quad view playback configuration can store up to approximately 8 weeks (4 ips, 30 GB HDD) or 16 weeks (1 ips, 60 GB HDD) of recordings. However, picture quality, number of cameras recorded, and record rate will affect the storage capacity of the unit.



**DataFAX**  
SPEC: 21964  
MANUAL: 219646

C1964 / REVISED 2-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

VIDEO4X4	Four-channel 30 GB HDD DVR, 14-inch color quad monitor, and four camera assemblies with audio (includes camera, lens, mounting bracket, 60-foot mini-DIN cables, and BNC cables)
VIDEO4X4PLUS	Same as VIDEO4X4 except has 60 GB HDD DVR

## DIGITAL VIDEO RECORDER

Input Voltage	80-240 VAC, 50/60 Hz, auto-ranging
Power Consumption	20 watts
Video Standard	NTSC/PAL*, switchable
Video Compression	MPEG
Resolution	352 x 240 pixels, true color
Recording Speed	1-30 ips, depending on system setup
Video Inputs	4, BNC
Video Outputs	2, BNC (1 monitor, 1 video printer)
Alarm Inputs	4, normally open dry contact
Alarm Output	1, normally open, latching, Form A

\* Recorder not PAL compatible with PMCQ14A.

## MONITOR (Model PMCQ14A)

Input Voltage	100 to 240 VAC, 50/60 Hz
Power Consumption	70 watts
Signal Format	NTSC only
Scanning System	2:1 interlace
Picture Elements	512 (H) x 492 (V)
Horizontal Resolution	350 TV lines (center)
Linearity	Less than 12%
Total Geometric Distortion	Less than 3%
Audio Output	1.1 W $\pm$ 0.2 W at 8-ohm resistive load
Alarm Inputs	4, activated by N.O. or N.C. contact closure (programmable)
Alarm Output	1, common to all 4 inputs. TTL compatible (programmable for high or low output)
Pixel Format	
Single Screen	720 (H) x 480 (V)
Quad Screen	360 (H) x 240 (V)
PIP Screen	208 (H) x 136 (V)
Refresh Rate	30 frames per second (NTSC)
Digital Zoom	2X
OSD Character	16 x 20 bit map font (upper case alpha characters, numbers, and symbols)
Video Switching Time	1 second (during multiple alarms)
Maximum Character	
Display Format	45 (H) x 24 (V) (1,080 characters)
Picture Tube	14-inch diagonal, color
Controls	Sharpness, color, brightness, contrast, tint, and volume

## CAMERA KIT (Model CCQ1400A-KIT)

Input Voltage	12 VDC, $\pm$ 2 VDC
Power Consumption	2 watts
Signal Format	NTSC
Scanning System	2:1 interlace
Sync System	Internal
Horizontal Resolution	330 TV lines (center)
Image Size Area	0.18" H x 0.15" V (0.45 x 0.39 cm)
Picture Elements	512 (H) x 492 (V)
Electronic Iris	1/60 to 1/100,000 second
Video Output	1 Vp-p $\pm$ 10%, 75 ohms
Auto White Balance	Electronic auto tracking
Minimum Illumination	0.9 lux at 30 IRE, f1.2
Lens	C/CS mount, f2.0, 4 mm lens

## GENERAL

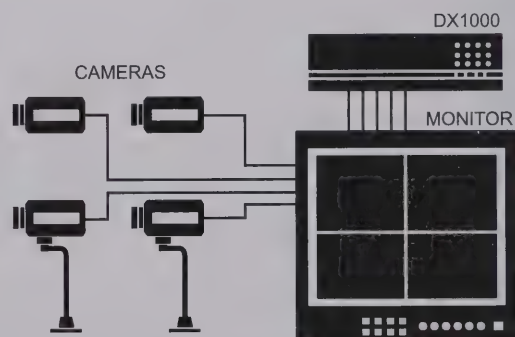
Operating Temperature	41° to 104°F (5° to 40°C)
Relative Humidity	Maximum 80%, non-condensing
Dimensions	
DVR	2.8" H x 10.5" W x 14.6" D (7 x 27 x 37 cm)
Monitor	12.75" H x 13.68" W x 14.68" D (32.38 x 34.75 x 37.29 cm)
Unit Weight	38 lb (17.24 kg)
Shipping Weight	45 lb (20.41 kg)

## CERTIFICATIONS

- CE Class A (monitor and camera)
- CE, Class B (DVR)
- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class A (monitor and camera)
- FCC, Class B (DVR)

## ACCESSORIES

RMA14F	Rack kit for mounting a single monitor in a standard 19" W (48.26 cm) EIA rack (8 RUs). Black polyester powder coat finish.
CCQCABLE-100EXT	100-foot extension cable for use with camera (CCQ1400A-KIT only). Maximum cable distance from camera to monitor is 260 feet (79 m).



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[www.pelco.com](http://www.pelco.com)

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## TLR3040 Series Video Cassette Recorder

### 40-HOUR/24-HOUR REAL-TIME, HIGH DENSITY TIME-LAPSE VCR

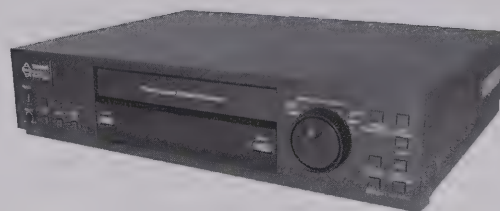
#### Product Features

- "Real-Time," High Density, 24-Hour Recording
- 6/18/30 or 8/24/40 Hour Time-Lapse Recording
- Repeat Recording
- Series Recording with Multiple Recorders
- Daily/Weekly/Holiday Recording Schedules
- Audio Recording up to 40 Hours
- One-Button Recording Check
- Jog/Shuttle for Easy Forward or Reverse Field Playback
- Search Using Alarm Index, Time and Date, Skip
- On-Screen Programming
- Interfaces with Pelco's Genex® Multiplexers
- Automatic Head Cleaning

The **TLR3040** is a full-featured, versatile, 40-hour time-lapse recorder designed for a wide variety of security applications. From simple, small retail applications to large industrial security systems, the **TLR3040** has the features needed to satisfy almost any application.

The **TLR3040** can record for 6, 18, or 30 hours on a T-120 tape cassette or 8, 24, or 40 hours on a T-160 tape. Playback in 2H mode is 2 hours on a T-120 tape and 2 hours and 40 minutes on a T-160 tape. In addition, the **TLR3040** can be programmed to record specific time periods on a daily or weekly schedule. It can also be set up to record only upon activation by an external alarm. Recording time can be extended significantly by combining these features with the time-lapse capability. Twenty fields/second "real-time" recording is available in L24H mode with T160 tape.

The **TLR3040** can also be programmed for repeat recording. This means when the end of the tape is reached, the unit automatically rewinds and begins recording again. However, if an alarm is received during recording, the unit stops at the end of the tape. The **TLR3040** also has an end-of-tape output that can activate another recorder. This feature allows multiple **TLR3040s** to be connected to increase the system's recording time.



- Complete or Partial Front Panel Lock
- Battery Backup of Settings
- Elapsed-Time Display
- Tape Use Counter
- Daylight Saving Time Setting

Special playback features include speed search and reverse playback. With the front panel jog/shuttle controls, users can quickly search the recording in either direction, then easily switch to forward/reverse, field-by-field movement for detailed study. Users can also search to the minute for a specific date and time.

The **TLR3040** can be easily set up using programming menus displayed on the video monitor. The menus can be accessed at the press of a button.

Complete or partial lock modes block all or some front panel functions, preventing changes to the unit's settings. A tape use counter displays how many times the same tape has been reused in repeat recording mode (useful in monitoring tape replacement). Another useful maintenance feature in scheduling preventative maintenance and head replacement is the elapsed time of recording and playback.

The **TLR3040** has a programmable clock pulse output for easy interfacing with Pelco's Genex Series multiplexers for automatic speed tracking.

VIDEO RECORDERS  
TIME-LAPSE, 40-HOUR



DataFAX  
SPEC: 2671  
MANUAL: Not Available through DataFAX

C671 / REVISED 10-01



International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODEL

TLR3040

Time-lapse NTSC VCR with standard 6- and 8-hour recording modes and time-lapse recording modes for 18, 24, 30, and 40 hours (depending on type of tape). Playback in 2H mode is either 2 hours or 2 hours and 40 minutes (depending on type of tape).

## ELECTRICAL/VIDEO/AUDIO

Power Source	100-230 VAC, 50/60 Hz (included power cord is for 120 VAC, 60 Hz)
Power Consumption Rating	Approximately 20 watts
ALM/CALL/MODE	Active: "low" level, maximum current 50 mA (+5 VDC)/10 mA (+24 VDC) Non-active: open, maximum voltage +24 VDC
ALM/RST/REC	Active: when terminals are short-circuited or "low" level voltage is applied Non-active: open
CLK	Recording: a pulse of the frequency division ratio selected in Rear Terminal menu
Television System	525 lines, 60 fields, NTSC-type color system
Horizontal Resolution	More than 330 lines (black and white) More than 240 lines (color)
Video Recording System	Four rotary heads
Luminance Signal	Frequency modulation recording
Color Signal	Low frequency conversion, sub-carrier phase shift recording
Audio Track	One track
Tape Format	VHS, 1/2-inch width high-density video cassette tape
Tape Speed and Recording Time	See table below
Fast Forward/Rewind Time	Approximately 160 seconds with T-160 tape
Heads	Four rotary heads
Video	One stationary head
Audio/Control	One full-track head
Erase	Three direct drive (drum, capstan)
Motors	1.0 Vp-p, 75 ohms, BNC plug
Video Input/Output	308 mV (rms), 50 ohms, RCA plug
Audio Input	388 mV (rms), 1 ohm, RCA plug
Audio Output	
Audio Frequency Response	70 Hz to 4 kHz (8H mode)

## Signal-to-Noise Ratio

Video	>42 dB
Audio	>43 dB
Alarm Recording Time	15 sec/30 sec/45 sec/1 min/2 min/5 min/10 min
Timed	MAN1 – Until the alarm reset terminal is grounded MAN2 – While the alarm-in terminal is grounded
Manual	
Display Format	
Display Mode 1	(Month)-(Day)-(Year) (Hour):(Minute):(Second) (Alarm recording number)
Display Mode 2	(Month)-(Day)-(Year) (Day of week) (Alarm recording number) (Hour):(Minute):(Second) (Recording mode)
Display Position	In any position
Time Program	Eight programs – daily start and stop times for one week
Battery Backup	Lasts 31 days (when fully charged)
Elapsed Time Indicator	89,999 hours maximum

## GENERAL

Connectors	
Screw terminal	ALM, RST, and REC inputs GND (Ground) ALM, CLK, MODE, and CALL outputs
BNC	Video input/output
RCA	Audio input/output
Operating Temperature	41° to 104°F (5° to 40°C)
Relative Humidity	Maximum 80%
Dimensions (JOG Dial Included)	3.7" H x 16.7" W x 12.3" D (9.5 x 42.5 x 31.3 cm)
Unit Weight	9 lb (4.2 kg)
Shipping Weight	13 lb (5.9 kg) approximate

## CERTIFICATIONS/RATINGS

- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## OPTIONAL ACCESSORIES

LB1000	Horizontal lock box for top- and front-loading VCRs.
LB3000, LB300PS	Wall mount lock box for front loading VCR.
RM2001, RM2001SD	Rack mount (3 RUs) for TLR Series VCRs. Fits standard 19-inch (48.26 cm) console.

## Tape Speed and Recording Time (T-160 Cassette)

Mode	Record Time (hours)	Speed (mm/s)	Recording Interval (s/field)	Recording Fields (per second)	Video Signal	Audio Signal	Tape Drive
8H (EP)	8	11.12	0.0167	60 (Real time)	Continuous	Recordable	Continuous
L24H (EP)	24	3.71	0.050	20 (Real time)	Time lapse	Recordable	Continuous (slow)
L40H (EP)	40	2.22	0.083	12	Time lapse	Recordable	Continuous (slow)



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**International** Tel: (559) 292-1981 • FAX (559) 348-1120 • DataFAX (559) 292-0435

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## TLR3096 Series Video Cassette Recorder

### 96-HOUR TIME-LAPSE VCR

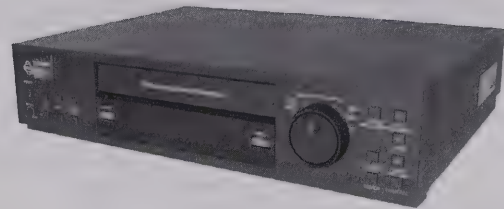
#### Product Features

- 6/18/30/54/78/102 or 8/24/40/72/104/136 Hour Time-Lapse Recording
- Repeat Recording
- Series Recording with Multiple Recorders
- Daily/Weekly/Holiday Recording Schedules
- Audio Recording up to 40 Hours
- One-Button Recording Check
- Super Resolution Option
- Jog/Shuttle for Easy Forward or Reverse Field Playback
- Search Using Alarm Index, Time and Date, Skip, Counter Memory Stop
- On-Screen Programming
- Interfaces with Pelco's Genex® Multiplexers
- Automatic Head Cleaning

The **TLR3096** is a full-featured, versatile, 96-hour time-lapse recorder designed for a wide variety of security applications. From simple, small retail applications to large industrial security systems, the **TLR3096** has the features needed to satisfy almost any application.

The **TLR3096** can record for 6, 18, 30, 54, 78, or 102 hours on a T-120 tape cassette or 8, 24, 40, 72, 104, or 136 hours on a T-160 tape. Playback in 2H mode is 2 hours on a T-120 tape and 2 hours and 40 minutes on a T-160 tape. In addition, the **TLR3096** can be programmed to record specific time periods on a daily or weekly schedule. It can also be set up to record only upon activation by an external alarm. Recording time can be extended significantly by combining these features with the time-lapse capability.

The **TLR3096** can also be programmed for repeat recording. This means when the end of the tape is reached, the unit automatically rewinds and begins recording again. However, if an alarm is received during recording, the unit stops at the end of the tape. The **TLR3096** also has an end-of-tape output that can activate another recorder. This feature allows multiple **TLR3096**s to be connected to increase the system's recording time.



- Complete or Partial Front Panel Lock
- Battery Backup of Settings
- Elapsed-Time Display
- Tape Use Counter
- Daylight Saving Time Setting

Special playback features include speed search and reverse playback. With the front panel jog/shuttle controls, users can quickly search the recording in either direction, then easily switch to forward/reverse, field-by-field movement for detailed study. Users can also search to the minute for a specific date and time.

The **TLR3096** can be easily set up using programming menus displayed on the video monitor. The menus can be accessed at the press of a button.

Complete or partial lock modes block all or some front panel functions, preventing changes to the unit's settings. A tape use counter displays how many times the same tape has been reused in repeat recording mode (useful in monitoring tape replacement). Another useful maintenance feature in scheduling preventative maintenance and head replacement is the elapsed time of recording and playback.

The **TLR3096** has a programmable clock pulse output for easy interfacing with Pelco's Genex Series multiplexers for automatic speed tracking.

VIDEO RECORDERS  
TIME-LAPSE 96-HOUR



**DataFAX**  
**SPEC:** 2672  
**MANUAL:** Not Available through DataFAX

C672 / NEW 3-01



International Organization  
for Standardization  
Registered ISO 9001



## MODEL

TLR3096

Time-lapse NTSC VCR with standard 6- and 8-hour recording modes and time-lapse recording modes for 18, 24, 30, 40, 54, 72, 78, 102, 104, and 136 hours (depending on type of tape). Playback in 2H mode is either 2 hours or 2 hours and 40 minutes (depending on type of tape).

## ELECTRICAL/VIDEO/AUDIO

Power Source	100-230 VAC ( $\pm 10\%$ ), 50/60 Hz (included power cord is for 120 VAC, 60 Hz)
Power Consumption	Approximately 18 watts
Television System	EIA standard 525 lines, 60 fields, NTSC-type color system
Horizontal Resolution	More than 400 lines (super resolution mode) More than 240 lines (VHS mode)
Video Recording System	Four rotary heads
Luminance Signal	Frequency modulation recording
Color Signal	Low frequency conversion, sub-carrier phase shift recording
Audio Track	One track
Tape Format	VHS, 1/2-inch width high-density video cassette tape
Tape Speed and Recording Time	See table below
Fast Forward/ Rewind Time	Approximately 120 seconds with T-120 tape
Heads	Video: Four rotary heads Audio/Control: One stationary head Erase: One full-track head
Motors	Three direct drive (drum, capstan)
Video Input/Output	1.0 Vp-p, 75 ohms, BNC plug
Audio Input	308 mV (rms), 50K ohms, RCA plug
Microphone Input	0.346 mV (rms), 600 ohms, mini-jack
Audio Output	388 mV (rms), 1K ohms, RCA plug
Audio Frequency Response	70 Hz to 7 kHz (6H mode)
Signal-to-Noise Ratio	
Video	Better than 42 dB
Audio	Better than 43 dB

## Alarm Recording Time

Timed	15 sec/30 sec/45 sec/1 min/2 min/5 min/10 min
Manual	MAN1 – Until the alarm reset terminal is grounded MAN2 – While the alarm-in terminal is grounded
Display Format	(Month)-(Day)-(Year)
Display Mode 1	(Hour):(Minute):(Second) (Alarm recording number)
Display Mode 2	(Month)-(Day)-(Year) (Day of week) (Alarm recording number) (Hour):(Minute):(Second) (Recording mode)
Display Position	In any position
Timer Program	Eight programs – daily start and stop times for one week
Battery Backup	Lasts 31 days (when fully charged)
Elapsed Time Indicator	89,999 hours maximum

## GENERAL

Connectors	
Screw terminal	ALM, RST, and REC inputs GND (Ground) ALM, CLK, MODE, and CALL outputs
REMOTE Jack	Jack for connecting the remote control unit (remote control not supplied)
RS-232C Interface	DB9
Operating Temperature	41° to 104°F (5° to 40°C)
Relative Humidity	Maximum 80%
Dimensions (JOG Dial Included)	3.7" H x 16.7" W x 12.4" D (9.5 x 42.5 x 31.4 cm)
Unit Weight	9 lb (4.2 kg)
Shipping Weight	13 lb (5.9 kg) approximate

## CERTIFICATIONS/RATINGS

- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## OPTIONAL ACCESSORIES

LB1000	Horizontal lock box for top- and front-loading VCRs.
LB3000, LB300PS	Wall mount lock box for front loading VCR.
RM2001, RM2001SD	Rack mount (3 RUs) for TLR Series VCRs. Fits standard 19-inch (48.26 cm) console.

## Tape Speed and Recording Time

T-120 Mode	T-160 Mode	Record Time (hours) (T-120/T-160)	Speed (mm/s)	Recording Interval (s/field)	Recording Fields (per second)	Video Signal	Audio Signal	Tape Drive
6H (EP)	8H (EP)	6/8	11.12	0.0167	60	Continuous	Recordable	Continuous
L18H (EP)	L24H (EP)	18/24	3.71	0.050	20	Time Lapse	Recordable	Continuous (slow)
L30 (EP)	L40H (EP)	30/40	2.22	0.083	12	Time Lapse	Recordable	Continuous (slow)
48H (EP)	64H (EP)	54/72	--	0.150	6.7	Time Lapse	Not recorded	Time Lapse
72H (EP)	96H (EP)	78/104	--	0.217	4.6	Time Lapse	Not recorded	Time Lapse
96H (EP)	128H (EP)	102/136	--	0.284	3.5	Time Lapse	Not recorded	Time Lapse
0H (EP)	0H (EP)	--	--	--	--	Time Lapse	Not recorded	Time Lapse



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## TLR3168 Series Video Cassette Recorder

### 168-HOUR TIME-LAPSE VCR

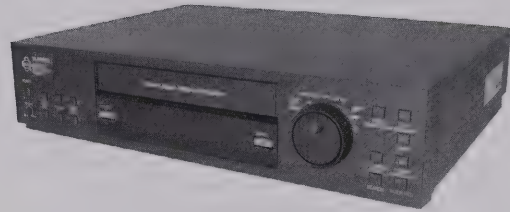
#### Product Features

- 6/8 Hour Standard Recording
- 18/30/54/78/102/126/174 or 24/40/72/104/136/160/232 Hour Time-Lapse Recording
- Repeat Recording
- Series Recording with Multiple Recorders
- Daily/Weekly/Holiday Recording Schedules
- Audio Recording up to 40 Hours
- One-Button Recording Check
- Super Resolution Option
- Jog/Shuttle for Easy Forward or Reverse Field Playback
- Search Using Alarm Index, Time and Date, Skip, Counter Memory Stop
- On-Screen Programming

The **TLR3168** is a full-featured, versatile 168-hour time-lapse recorder designed for a wide variety of security applications. From simple, small retail applications to large industrial security systems, the TLR3168 has the features needed to satisfy almost any application.

The **TLR3168** can record for 6, 18, 30, 54, 78, 102, 126, or 174 hours on a T-120 tape cassette or 8, 24, 40, 72, 104, 136, 160, or 232 hours on a T-160 tape. Playback in 2H mode is 2 hours on a T-120 tape and 2 hours and 40 minutes on a T-160 tape. In addition, the **TLR3168** can be programmed to record specific time periods on a daily or weekly schedule. It can also be set up to record only upon activation by an external alarm. Recording time can be extended significantly by combining these features with the time-lapse capability.

The **TLR3168** can also be programmed for repeat recording. This means when the end of the tape is reached, the unit automatically rewinds and begins recording again. However, if an alarm is received during recording, the unit stops at the end of the tape. The **TLR3168** also has an end-of-tape output that can activate another recorder. This feature allows multiple **TLR3168s** to be connected to increase the system's recording time.



- Interfaces with Pelco's Genex® Multiplexers
- Automatic Head Cleaning
- Complete or Partial Front Panel Lock
- Battery Backup of Settings
- Elapsed Time Display
- Tape Use Counter
- Daylight Saving Time Setting

Special playback features include speed search and reverse playback. With the front panel jog/shuttle controls, users can quickly search the recording in either direction, then easily switch to forward/reverse, field-by-field movement for detailed study. Users can also search to the minute for a specific date and time.

The **TLR3168** can be easily set up using programming menus displayed on the video monitor. The menus can be accessed at the press of a button.

Complete or partial lock modes block all or some front panel functions, preventing changes to the unit's settings. A tape use counter displays how many times the same tape has been reused in repeat recording mode (useful in monitoring tape replacement). Another useful maintenance feature in scheduling preventative maintenance and head replacement is the elapsed time of recording and playback.

The **TLR3168** has a programmable clock pulse output for easy interfacing with Pelco's Genex Series multiplexers for automatic speed tracking.

VIDEO RECORDERS,  
TIME-LAPSE, 168-HOUR



**DataFAX**  
**SPEC:** 2673  
**MANUAL:** Not Available through DataFAX

C673 / NEW 3-01



International Organization  
for Standardization,  
Registered ISO 9001



## MODEL

TLR3168

Time-lapse NTSC VCR with standard 6- and 8-hour recording modes and time-lapse recording modes for 18, 24, 30, 40, 54, 72, 78, 102, 104, 126, 136, 160, 174, or 232 hours (depending on type of tape).

## ELECTRICAL/VIDEO/AUDIO

Power Source	100-230 VAC $\pm$ 10%, 50/60 Hz (the included power cord is used for 120 VAC, 60 Hz)
Power Consumption	Approximately 20 watts
Television System	EIA standard 525 lines, 60 fields, NTSC-type color system
Horizontal Resolution	More than 400 lines (super resolution mode) More than 240 lines (VHS mode)
Video Recording System	Four rotary heads
Luminance Signal	Frequency modulation recording
Color Signal	Low frequency conversion, subcarrier phase shift recording
Audio Track	One track
Tape Format	VHS, 1/2-inch width, high-density, video cassette tape
Tape Speed and Recording Time	See table below
Fast Forward/Rewind Time	Approx. 120 seconds with T-120 tape
Heads	
Video	Four rotary heads
Audio/Control	One stationary head
Erase	One full-track head
Motors	Three direct drive (drum/capstan)
Video Input/Output	1.0 Vp-p, 75 ohms, BNC plug
Audio Input	308 mV (rms), 50K ohms, RCA plug
Microphone Input	0.346 mV (rms), 600 ohms, mini-jack
Audio Output	388 mV (rms), 1K ohms, RCA plug
Audio Frequency Response	70 Hz to 7 kHz (6H mode)
Signal-to-Noise Ratio	
Video	Better than 42 dB
Audio	Better than 43 dB

## Alarm Recording Time

Timed	15 sec/30 sec/45 sec/1 min/2 min/5 min/10 min
Manual	MAN1 – Until the alarm reset terminal is grounded MAN2 – While the alarm-in terminal is grounded
Display Format	(Month)-(Day)-(Year)(Hour):(Minute):(Second)
Display Mode 1	(Alarm recording number)
Display Mode 2	(Month)-(Day)-(Year)(Day of week)(Alarm recording number)(Hour):(Minute):(Second)(Recording mode)
Display Position	In any position
Timer Program	Eight programs – daily start and stop times for one week
Battery Backup	Lasts 31 days (when fully charged)
Elapsed Timer Indicator	89,999 hours maximum

## GENERAL

Connectors	
Screw Terminal	ALM, RST, REC, GND, CLK, MODE, and CALL
REMOTE Jack	Jack for connecting the remote control unit (remote control not supplied)
RS-232C Interface	DB9
Operating Temperature	41° to 104°F (5° to 40°C)
Relative Humidity	Maximum 80%
Dimensions (Jog Dial Included)	3.7" H x 16.7" W x 12.4" D (9.5 x 42.5 x 31.4 cm)
Unit Weight	9 lb (4.2 kg)
Shipping Weight	13 lb (5.9 kg) approximate

## CERTIFICATIONS/RATINGS/PATENTS

- UL Listed
- UL Listed to Canadian safety standards
- FCC, Class B

## OPTIONAL ACCESSORIES

LB1000	Horizontal lock box for top and front loading VCRs.
LB3000, LB3000PS	Wall mount lock box for front loading VCRs.
RM2001, RM2001SD	Rack mount (3 RUs) for TLR Series VCRs. Fits standard 19-inch (48.26 cm) console.

## Tape Speed and Recording Time (T-160 Cassette)

T-120 Mode	T-160 Mode	Record Time (hours) (T-120/T-160)	Speed (mm/s)	Recording Interval (s/field)	Recording Fields (per second)	Video Signal	Audio Signal	Tape Drive
6H (EP)	8H (EP)	6/8	11.12	0.0167	60	Continuous	Recordable	Continuous
L18H (EP)	L24H (EP)	18/24	3.71	0.050	20	Time Lapse	Recordable	Continuous (slow)
L30 (EP)	L40H (EP)	30/40	2.22	0.083	12	Time Lapse	Recordable	Continuous (slow)
48H (EP)	64H (EP)	54/72	--	0.150	6.7	Time Lapse	Not recorded	Time Lapse
72H (EP)	96H (EP)	78/104	--	0.217	4.6	Time Lapse	Not recorded	Time Lapse
96H (EP)	128H (EP)	102/136	--	0.284	3.5	Time Lapse	Not recorded	Time Lapse
120H (EP)	160H (EP)	126/160	--	0.350	2.8	Time Lapse	Not recorded	Time Lapse
168H (EP)	224H (EP)	174/232	--	0.484	2.1	Time Lapse	Not recorded	Time Lapse
0H (EP)	0H (EP)	--	--	--	--	Time Lapse	Not recorded	Time Lapse



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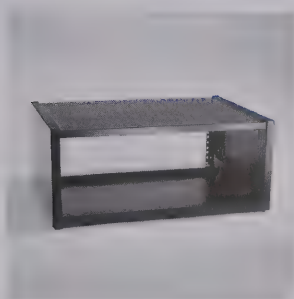
**International** Tel: (559) 292-1981 • FAX (559) 348-1120 • DataFAX (559) 292-0435

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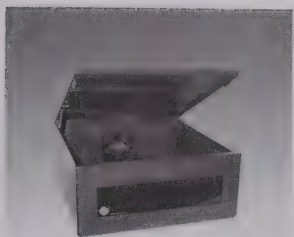
## RACKS AND CONSOLES

**Consoles, EIA Rack Kits, Lock Boxes and Monitor/VCR Rack Kits**



### Table Top Consoles

Pelco's desktop consoles and modular components provide a professional, integrated look for controls, video switchers, monitors, and video signal equipment. Modular units are easy to assemble, and provide maximum flexibility and versatility when designing a support structure for video equipment. Accessories include extender kits, wedge kits, and blank panels for standard and extended depth models.



### Miscellaneous EIA Rack Kits

Pelco's rack mount kits are designed specifically for Pelco products to convert desktop equipment to rack mount units. The product line includes rack kits for controls, switchers, monitors, and VCRs. All kits conform to the EIA 19-inch (48.26 cm) rack standard.

### Lock Boxes

Pelco's lock boxes provide high security protection for VCRs, multiplexers, quads, and switchers. Units maintain security integrity for all tape recordings and feature tamper-resistant panel access for connections.



### Monitor Mounts

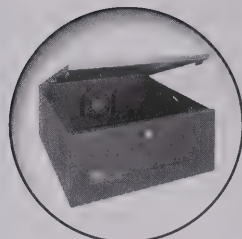
Pelco's monitor mounts are designed to safely mount a monitor from either a ceiling or a wall. Installations include security systems, educational institutions, churches, hospitals, and other applications requiring overhead monitor mounting and positioning. Pelco manufactures monitor mounts for units with a minimal height and width of 10.12 inches (25.70 cm) to a maximum of 27.75 (H) x 31.45 (W) inches (70.48 x 79.95 cm).

Immediately following this page you will find the product selection guide listed below to assist you in selecting Pelco products. Refer to this guide for model numbers. Detailed information about these products can be found on the related specification sheets within this section.

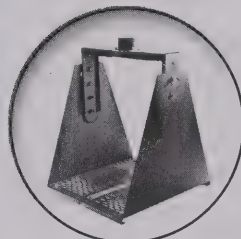
- Racks and Consoles Selection Guide



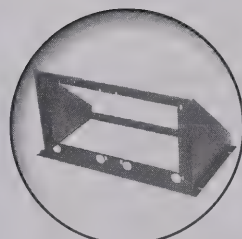
The following is a quick overview of the mounting equipment available for Power & Communication and Control Site equipment. Please refer to the appropriate specification sheet for actual dimensions and product compatibility.



LB1000



MR3050



RMA901

Model	Applicable Product	See Page
<b>Desktop</b>		
CE Series	Controls, Switchers, Monitors and Video Signal Equipment	523
DT200	Controls, Switchers, and Video Signal Equipment	525
LB1000 Series	Top- or Front-loading VCRs	533
LB2000 Series	Computer Disk Drives or Vertical Devices	533
<b>Ceiling/Pedestal/Wall Mount</b>		
LB3000 Series	VCR, Multiplexer and Tape Storage	535
MM1000, MM2000, MM3000	Monitor	537
MR3000, MR3050	Monitor	539
MR4050	Monitor	543
MR5000L	PMCS19A, PMC21A	541
MR5000M	PMC14F, PMCS14A, PMCS17A	541
<b>Rack Mount (EIA Standard)</b>		
NET300RK	PelcoNet™ NET300 Transmitter/Receiver	525
NET350RK	PelcoNet™ NET350 Transmitter/Receiver	525
R300	Controls, Switchers, and Video Signal Equipment	525
R400	MPTAZ Series Control	525
RK100	QD104C, QD104M Quad; MX4004CD Multiplexer	525
RK101	DX2000DH Data Hub	525
RKS10	Controls, Switchers, and Video Signal Equipment	525
RKS20	MS500 Series Switchers	525
RKS40	MS518AFL, MS540LDT Switchers	525
RMQ4	VA6108, VA6208 Switchers	525
RM1800	VCR (Generic)	529
RM2001, RM2001SD	TLR2000/TLR3000 Series VCRs	529
RM6010	VCR (Generic)	529
RM900	VCR (Generic)	529
RMA10T	PMC10A Monitor	529
RMA1201	PMM1201/PMM12A Monitor	529
RMA14F	PMC14F, PMC14H, and PMCQ14A Monitors	529
RMA14T	PMCS14A Monitor	529
RMA1501	PMM1501/PMM15A Monitor	529
RMA17T	PMCS17A Monitor	529
RMA19T	PMCS19A Monitor	529
RMA901	PMM901/PMM9A Monitor	529
RMJ9UC	PMC9A Monitor	529
RMJ9UCA	Generic Monitor	529
RMQ10T	PMC10A Monitor	529
RMQ14T	PMCS14A Monitor	529
RMQ17T	PMCS17A Monitor	529

## CE4/CE9/CE16 Series Console

### DESKTOP, STANDARD OR EXTENDED DEPTH

## Product Features

- Black or Gray Finish
- “Building Block” Modular Design Permits Economical Expansion
- Choose From Standard (14-Inch/35.56 cm) or Extended (24-Inch/60.96 cm) Depth

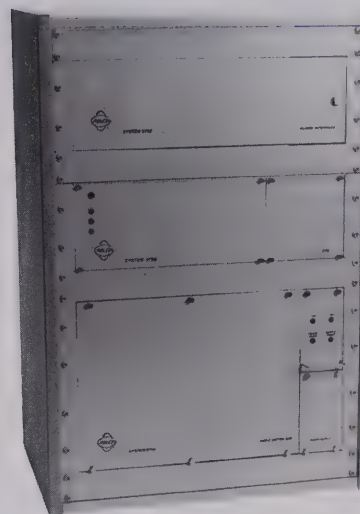
Pelco's **CE Series** desktop consoles and modular components provide a professional, integrated appearance for controls, video switchers, monitors, and video signal equipment. Economical "building block" modular design allows you to custom-design, expand, and upgrade the console to meet the exact requirements of your specific installation from the simplest to the most complex.

The three basic models are available in either a 7-inch (17.78 cm), 15.75-inch (40 cm) or 28-inch (71.12 cm) height. All consoles are 19 inches wide and are available in either a standard 14-inch (35.56 cm) depth or extended 24-inch (60.96 cm) depth.

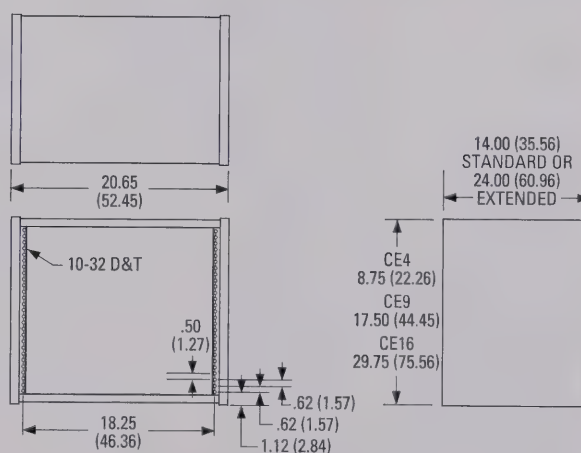
Easy-to-assemble modular components permit maximum flexibility and versatility in designing a configuration to house video control equipment at your fingertips. As an added feature, strapping plates are included with the **CE4, CE9, and CE16 Series**, which allow you to vertically stack two units.

Accessories include extender kits, wedge kits, and blank panels for standard and extended depth models. The extender kits (CEX/CEXD) horizontally join one or more consoles in series and securely hold the consoles together to prevent shifting and misalignment. Wedge kits join two separate consoles positioned at 45 degree angles to one another. Inexpensive blank panels (BP) are available in 1, 2, 4, 5, 10, and 12 rack units to cover unused spaces and give the unit a finished appearance. The panels can be easily removed at a later date to accommodate additional equipment.

All models are available in either a black or gray finish.



**CE16-GY CONSOLE WITH SYSTEM 9760®**



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

## MODELS

CE4-BK	Desktop console, 4 rack units high (7 inches/17.78 cm), standard depth (14 inches/35.56 cm), black
CE4-GY	Same as CE4-BK except gray
CE4D-BK	Desktop console, 4 rack units high (7 inches/17.78 cm), extended depth (24 inches/60.96 cm), black
CE4D-GY	Same as CE4D-BK except gray
CE9-BK	Desktop console, 9 rack units high (15.75 inches/40 cm), standard depth (14 inches/35.56 cm), black
CE9-GY	Same as CE9-BK except gray
CE9D-BK	Desktop console, 9 rack units high (15.75 inches/40 cm), extended depth (24 inches/60.96 cm), black
CE9D-GY	Same as CE9D-BK except gray
CE16-BK	Desktop console, 16 rack units high (28 inches/71.12 cm), standard depth (14 inches/35.56 cm), black
CE16-GY	Same as CE16-BK except gray
CE16D-BK	Desktop console, 16 rack units high (28 inches/71.12 cm), extended depth (24 inches/60.96 cm), black
CE16D-GY	Same as CE16D-BK except gray

## GENERAL

Construction	
Top, Bottom Panels	0.074-inch (1.88 mm) thick cold-rolled steel
Rear Panel	0.035-inch (.89 mm) thick cold-rolled steel (CE9 and CE16 series only)
Side Panels	0.080-inch (2.03 mm) thick formed aluminum
Dimensions	
CE4 Series	8.75" H x 20.50" W x 14"/24" D (22.2 x 52.1 x 35.6/60.96 cm)
CE9 Series	17.50" H x 20.50" W x 14"/24" D (44.5 x 52.1 x 35.6/60.96 cm)
CE16 Series	29.75" H x 20.50" W x 14"/24" D (75.6 x 52.1 x 35.6/60.96 cm)
Finish	Black or gray polyester powder coat
Shipping Weights	
CE4-BK/CE4-GY	21 lb (9.51 kg)
CE4D-BK/CE4D-GY	34 lb (15.40 kg)
CE9-BK/CE9-GY	28 lb (12.68 kg)
CE9D-BK/CE9D-GY	42 lb (19.02 kg)
CE16-BK/CE16-GY	34 lb (15.40 kg)
CE16D-BK/CE16D-GY	49 lb (22.19 kg)
CE45-BK/CE45-GY	4 lb (1.81 kg)
CE45D-BK/CE45D-GY	13 lb (5.88 kg)
CEX-BK/CEX-GY	2 lb (0.90 kg)
CEXD-BK/CEXD-GY	4 lb (1.81 kg)
BP1-BK/BP1-GY	1 lb (0.45 kg)
BP2-BK/BP2-GY	2 lb (0.90 kg)
BP4-BK/BK4-GY	3 lb (1.35 kg)
BP5-BK/BP5-GY	4 lb (1.81 kg)
BP10-BK/BP10-GY	6 lb (2.72 kg)
BP12-BK/BP12-GY	7 lb (3.17 kg)

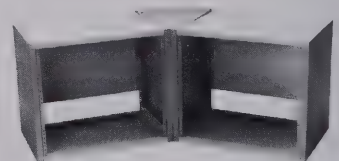
## CERTIFICATIONS

- UL Listed (CE4-BK, CE4-GY, CD4D-BK, CD4D-GY, CE45-BK, CE45-GY, CE45D-BK and CE45D-GY only)

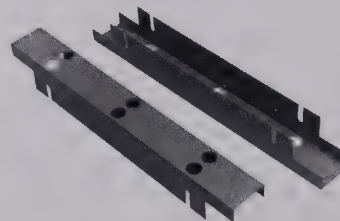
## OPTIONAL ACCESSORIES

CE45-BK	45 degree wedge kit, standard depth (14 inches/35.56 cm), black
CE45-GY	Same as CE45-BK except gray
CE45D-BK	45 degree wedge kit, extended depth (24 inches/60.96 cm), black
CE45D-GY	Same as CE45D-BK except gray
CEX-BK	Extender kit, standard depth (14 inches/35.56 cm), black. Use to join two CE4/9/16 consoles
CEX-GY	Same as CEX-BK except gray
CEXD-BK	Extender kit, extended depth (24 inches/60.96 cm), black. Use to join two CE4/9/16 consoles
CEXD-GY	Same as CEXD-BK except gray
BP1-BK	Blank panel, 1 rack unit, black
BP1-GY	Blank panel, 1 rack unit, gray
BP2-BK	Blank panel, 2 rack units, black
BP2-GY	Blank panel, 2 rack units, gray
BP4-BK	Blank panel, 4 rack units, black
BP4-GY	Blank panel, 4 rack units, gray
BP5-BK	Blank panel, 5 rack units, black
BP5-GY	Blank panel, 5 rack units, gray
BP10-BK	Blank panel, 10 rack units, black
BP10-GY	Blank panel, 10 rack units, gray
BP12-BK	Blank panel, 12 rack units, black
BP12-GY	Blank panel, 12 rack units, gray

The CE45 Series wedge filler connects two individual consoles positioned at a 45° angle to each other. Practical design permits creative arrangement of multiple consoles so they can work together for maximum efficiency.



**SHOWN: CE45-GY WITH TWO CE9-GY CONSOLES**



The CEX Series extenders join one or more consoles horizontally in series. The extenders securely hold the consoles together and prevent shifting and misalignment. Extenders can be added or removed as your system requirements change.



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## Desktop and Rack Mounting Kits

### CONTROLS/SWITCHERS/VIDEO SIGNAL EQUIPMENT

#### Product Features

- Low Cost
- Easy to Install
- Easily Converts Desktop Equipment
- For Use with Controls, Switchers, and Video Signal Equipment
- Rack Mounts Fit Standard 19-Inch EIA Rack
- Factory Racking Available (R300 Rack Kit Only)



**R300 RACK KIT**  
(SHOWN WITH THREE MLZ6DT CONTROLS)

The rack kits listed herein are designed for use with Pelco controls, switchers, and video signal equipment.

All rack kits (except the DT200) are designed to convert desktop equipment to rack mount units for use in standard 19-inch EIA racks or consoles. All rack kits have a black polyester powder coat finish to match the exterior finish of the equipment.

The R300 rack kit can accommodate up to three units in a single rack kit (two blank filler plates are provided for racking less than three units). Factory rack mounting is available for the R300 rack kit only if specified at time of original order.

The DT200 is designed to mount two units side-by-side in one desktop chassis.

The R400 is for racking one or two MPTAZ Series control modules, the RMQ4 is for one or two VA6108/VA6208 switchers, and the RK100 is for one or two MX4004CD/MX4004CD-X multiplexers or QD104C/QD104M quads (blank filler plate provided for racking less than two units).

The NET300RK and NET350RK are for use with PelcoNet™ 300/350 Series transmitters and receivers. The NET 300RK will accommodate up to five NET300T/NET300R units and the NET350 will accommodate up to three NET350T/NET350R units. The NET300RK includes four blank filler plates and the NET350RK includes two blank filler plates.

All other models (RKS10/RKS20/RKS40) are designed to accommodate a single unit.

To order the correct rack kit, refer to the cross-reference.



**DataFAX**  
**SPEC:** 2965  
**MANUAL:** See Listing Inside

C965 / REVISED 10-03

International Organization  
for Standardization  
Registered ISO 9001



# MODELS/TECHNICAL SPECIFICATIONS

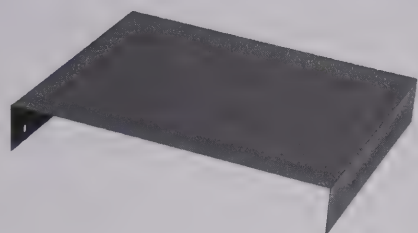
Rack Mount Model No.	Controls	Manual Switchers	Sequential Switchers	Video Signal Equipment	Rack Units*	Shipping Weight
DT200 or R300	MEHDT, MEH24DT, MLZ6DT, MLZA6DT, MPS5DT, MPS524DT, MPT115DT, MPTA115DT, MPT1510DT, MPTV1510DT, MPT24DT, MPTA24DT	MS504AF, MS504DT, MS504GDT, MS504GLDT, MS504LDT	VA6104, VA6104-X, VA6204, VA6204-X, VS5004	DA104DT, EA2000, EA2010, VSS200DT	1	DT200 2 lb (.9 kg) R300 5 lb (2.2 kg)
NET300RK				NET300R, NET300T	1	4 lb (1.8 kg)
NET350RK				NET350R, NET350T	1	3 lb (1.4 kg)
R400	MPTAZ115 DT, MPTAZ220DT, MPTAZ24DT				1	6 lb (2.7 kg)
RK100**				MX4004CD, MX4004CD-X, QD104C, QD104M	1	2 lb (.9 kg)
RK101				DX2000DH	1	2 lb (.9 kg)
RKS10	MPT8000CZ, PS506-24DT	MS508AF, MS504AFL, MS504BAF, MS504BAFL, MS508DT, MS508BAF, MS508BAFL, MS508GDT, MS508GLDT, MS508LDT	VA6112, VA6112-X, VA6212, VA6212-X, VS5008	TDG200DT, TDG200BDT	1	2 lb (.9 kg)
RKS20		MS512AF, MS518AF, MS508AFL, MS512AFL, MS512BAF, MS512BAFL, MS512DT, MS518DT, MS540DT, MS512GDT, MS518GDT, MS512GLDT, MS518GLDT, MS512LDT, MS518LDT			1	2 lb (.9 kg)
RKS40		MS518AFL, MS540LDT			2	2 lb (.9 kg)
RMQ4			VA6108, VA6108-X, VA6208, VA6208-X		1	5 lb (2.2 kg)

\*Rack units are calculated at a standard rack height of 1.75 inches (4.44 cm). (Example: If rack height measures 3.50 inches (8.89 cm), it would use two rack units.)

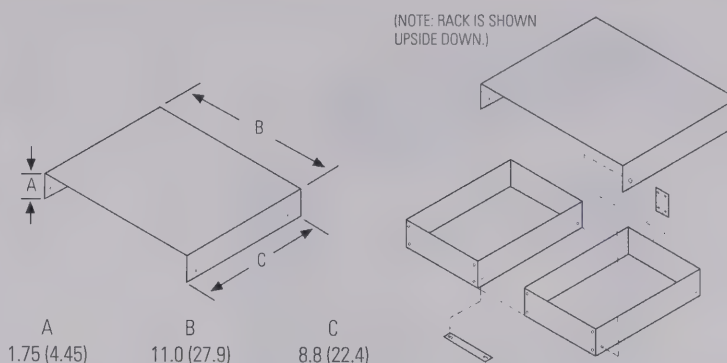
\*\*U.S. Patent pending.

## DataFAX Manual Document Numbers:

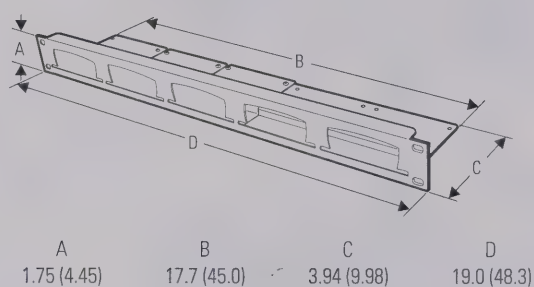
Model	DataFAX
DT200	28116
NET300RK	229096
NET350RK	229096
R300	28106
R400	28126
RK100	219676
RK101	219676
RKS10	28106
RKS20	28106
RKS40	28106
RMQ4	28146



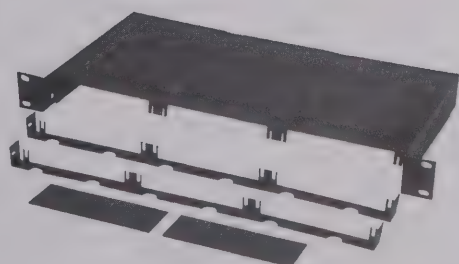
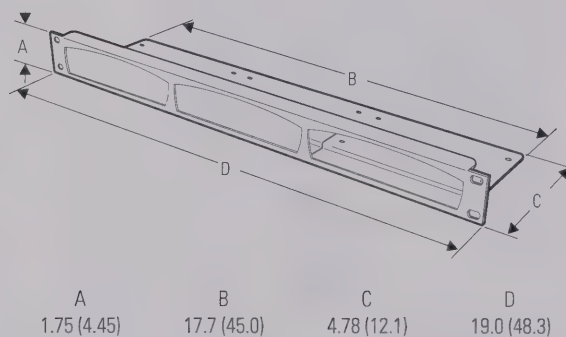
**DT200**



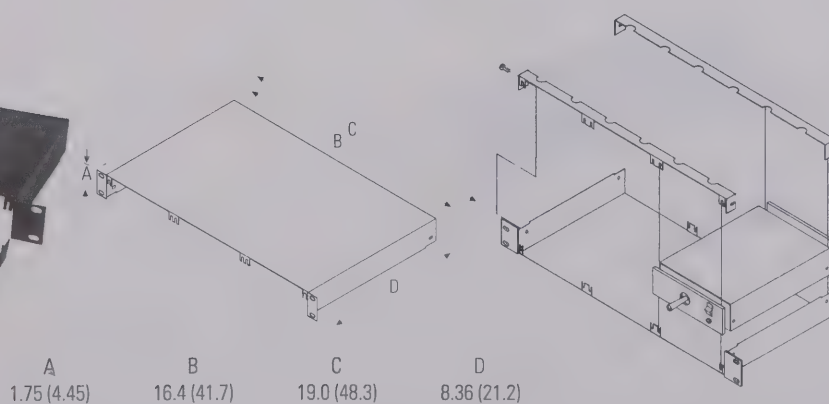
**NET300RK**



**NET350RK**

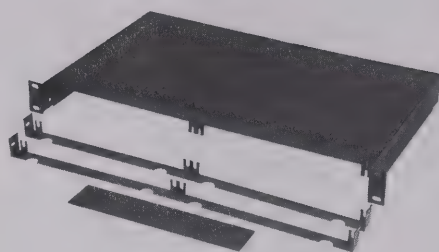


**R300**

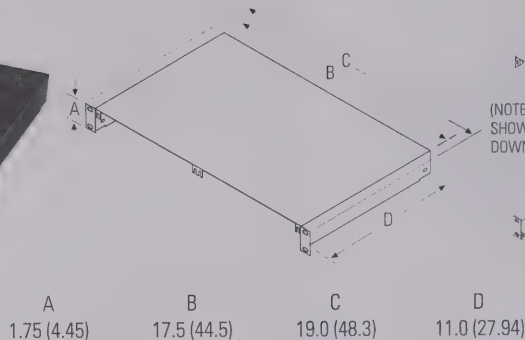


(NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.)





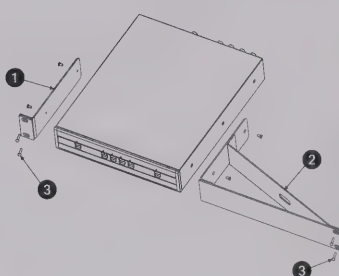
**R400**



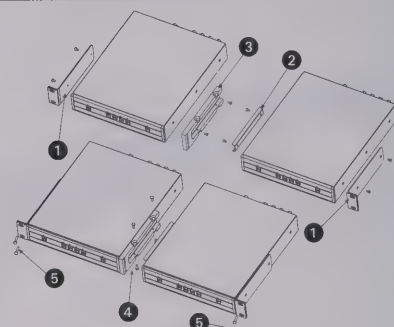
(NOTE: RACK IS SHOWN UPSIDE DOWN.)



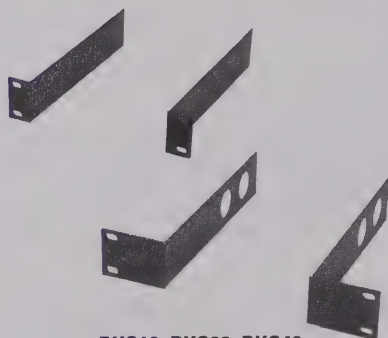
**RK100, RK101**



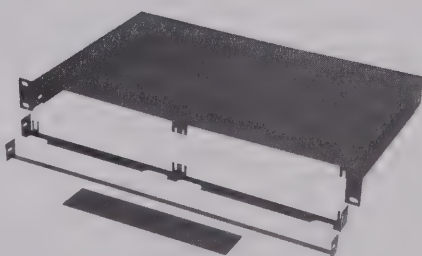
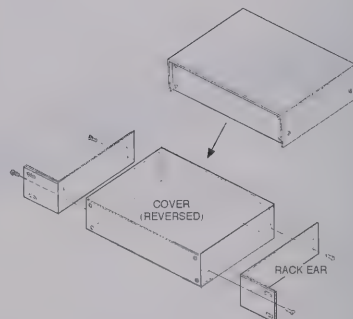
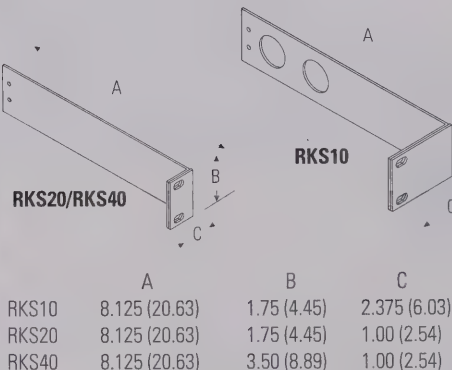
**Single Mount**



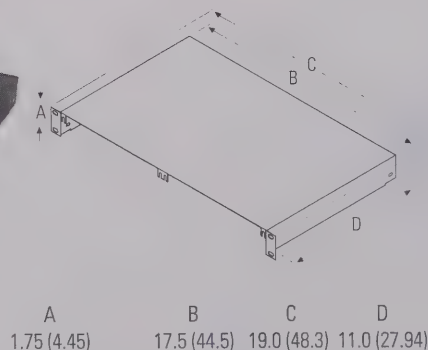
**Double Mount**



**RKS10, RKS20, RKS40**



**RMQ4**



(NOTE: RACK IS SHOWN UPSIDE DOWN.)



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## Rack Mounting Kits

### MONITORS AND VCRS

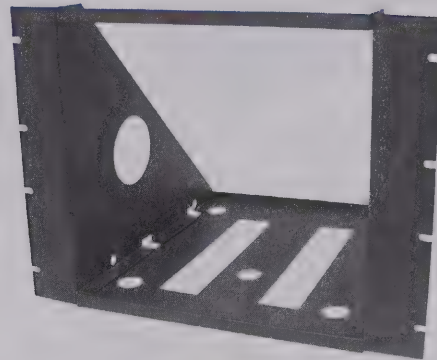
#### Product Features

- Low Cost
- Easy to Install
- Easily Converts Desktop Equipment
- For Use with Monitors and VCRs
- Rack Mounts Fit Standard 19-Inch EIA Rack

The various rack kits listed herein are designed for use with various monitors and VCRs.

All rack kits are designed to convert desktop equipment to rack mount units for use in standard 19-inch EIA racks or consoles. All rack kits have a black polyester powder coat finish to match the exterior finish of the equipment.

All models require one rack kit for each unit except the RMA901, RMJ9UC, and RMJ9UCA, which will accommodate one or two monitors (blanking plate provided for unused monitor space).



**RMA14F RACK KIT**



**RMA14F RACK KIT WITH PMC14H MONITOR**

RACKS AND CONSOLES  
EIA RACK KITS



**DataFAX**  
**SPEC:** 2967  
**MANUAL:** See Listing Inside

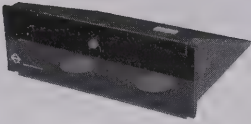
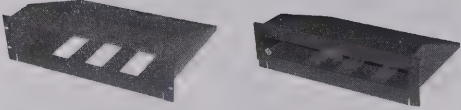
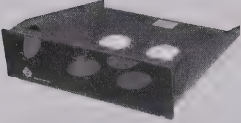
C967 / REVISED 10-03

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Note: The following rack mounts may possibly be used with equipment not listed herein. Refer to the actual rack dimensions for compatibility.

## VCR RACK KITS

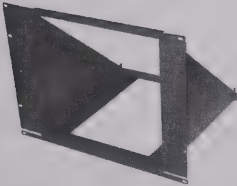
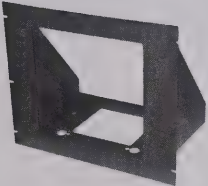
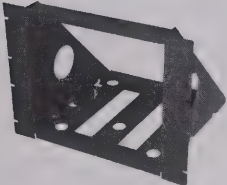
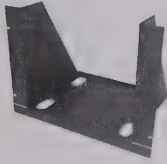
	Compatible Models	Rack Specifications	
 <b>RM1800</b>	Generic VCR	Cutout	5.27" H x 17.44" W (13.38 x 44.29 cm)
		Inside	6.16" H x 17.44" W x 14.19" D (15.6 x 44.29 x 36.04 cm)
		Rack Units*	4
		Shipping Wt	14 lb (6.34 kg) approximate
 <b>RM2001</b> <b>RM2001SD</b>	TLR2000 and TLR3000 Series	Inside	63.87" H x 16.73" W x 12.82" D (9.83 x 42.49 x 32.56 cm)
		Outside	5.22" H x 18.98" W x 13.16" D (13.26 x 48.21 x 33.43 cm)
		Rack Units*	3**
		Shipping Wt	13 lb (5.88 kg) approximate
 <b>RM6010</b>	Generic VCR	Cutout	4.69" H x 17.38" W (11.91 x 44.14 cm)
		Inside	4.88" H x 17.38" W x 16.81" D (12.39 x 44.14 x 42.69 cm)
		Outside	5.25" H x 16.94" D (13.33 x 43.01 cm)
		Rack Units*	3
		Shipping Wt	12 lb (5.43 kg) approximate

## DataFAX Manual Document Numbers:

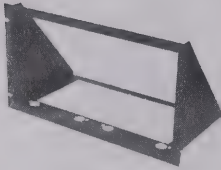
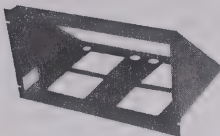
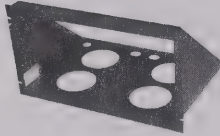

Model	DataFAX
RM1800	29696
RM2001	219576
RM2001SD	219576
RM6010	29606
RMA10T	219986
RMA1201	28046
RMA14F	219516
RMA14T	219986
RMA1501	29196
RMA17T	219986
RMA19T	219986
RMA901	29186
RMJ9UC	29746
RMJ9UCA	29376
RMQ10T	219976
RMQ14T	219966
RMQ17T	219966



## MONITOR RACK KITS

	Compatible Models	Rack Specifications	
 <p><b>RMA10T, RMA14T, RMA17T, RMA19T</b></p>	Pelco PMC10A (RMA10T), PMCS14A (RMA14T)	Inside,  Outside  Rack Units* Shipping Wt	<u>RMA10T</u> 10.67" H x 10.22" W x 11.58" D (27.1 x 25.96 x 29.41 cm) <u>RMA14T</u> 12.22" H x 11.58" D (31.04 x 29.41 cm) 7 13 lb (5.88 kg)
	Pelco PMCS17A (RMA17T), PMCS19A (RMA19T)	Inside  Outside  Rack Units* Shipping Wt	<u>RMA17T</u> 14.10" H x 15.98" W x 16.60" D (35.81 x 40.59 x 42.16 cm) <u>RMA19T</u> 15.72" H x 16.60" D (39.93 x 42.16 cm) 9 16 lb (7.24 kg)
 <p><b>RMA1201</b></p>	Pelco PMM1201, PMM1201-X, or PMM12A	Cutout  Inside  Outside  Rack Units* Shipping Wt	12.05" H x 12.25" W (30.60 x 31.12 cm) 13.64" H x 15.88" W x 11.00" D (34.64 x 40.33 x 27.94 cm) 15.75" H x 19.00" W x 11.00" D (40.01 x 48.26 x 27.94 cm) 9 14 lb (6.34 kg)
 <p><b>RMA14F</b></p>	Pelco PMC14F, PMC14H, PMQC14A	Cutout  Inside  Outside  Rack Units* Shipping Wt	12.62" H x 13.88" W (32.06 x 35.26 cm) 12.62" H x 13.88" W x 14.66" D (32.06 x 35.26 x 37.24 cm) 13.97" H x 14.72" D (35.48 x 37.39 cm) 8** 15 lb (6.79 kg)
 <p><b>RMA1501</b></p>	Pelco PMM1501, PMM1501-X, or PMM15A	Inside  Outside  Rack Units* Shipping Wt	12.62" H x 14.26" W x 12.40" D (32.06 x 36.22 x 31.49 cm) 14.00" H x 12.40" D (35.56 x 31.50 cm) 8 12 lb (5.43 kg)

## MONITOR RACK KITS

	Compatible Models	Rack Specifications			
 <b>RMA901*</b>	Pelco PMM901, PMM901-X, or PMM9A	Cutout	9.125" H x 17.55" W (23.17 x 44.57 cm)		
		Inside	9.69" H x 17.50" W x 10.30" D (24.61 x 44.45 x 26.16 cm)		
		Outside	10.50" H x 10.20" D (26.67 x 25.90 cm)		
		Rack Units*	6		
		Shipping Wt	8 lb (3.62 kg) approximate		
 <b>RMJ9UC*</b>	PMC9A	Cutout	8.75" H x 17.62" W (22.22 x 44.75 cm)		
			8.75" H x 9.01" W (with blanking plate)		
		Inside	9.53" H x 17.62" W x 12.38" D (24.21 x 44.74 x 31.45 cm)		
		Outside	10.42" H x 12.50" D (26.46 x 31.75 cm)		
		Rack Units*	6**		
Shipping Wt	11 lb (4.98 kg) approximate				
 <b>RMJ9UCA*</b>	Generic Monitor(s)	Cutout	8.75" H x 17.62" W (22.22 x 44.75 cm)		
			8.75" H x 9.01" W (with blanking plate)		
		Inside	9.53" H x 17.62" W x 11.88" D (24.21 x 44.74 x 30.18 cm)		
		Outside	10.42" H x 12.00" D (26.46 x 30.48 cm)		
		Rack Units*	6**		
Shipping Wt	11 lb (4.98 kg) approximate				
 <b>RMQ10T, RMQ14T, RMQ17T</b>	Pelco PMC10A (RMQ10T), PMCS14A (RMQ14T), PMCS17A (RMQ17T)	Inside	<u>RMQ10T</u> 10.47" H x 4.40" W (26.59 x 11.18 cm)	<u>RMQ14T</u> 12.22" H x 2.45" W (31.04 x 6.22 cm)	<u>RMQ17T</u> 13.97" H x 1.50" W (35.48 x 3.81 cm)
		Rack Units*	7***	8***	9***
		Shipping Wt	13 lb (5.8 kg)	15 lb (6.8 kg)	16 lb (7.2 kg)

\*Rack units are calculated at a standard rack height of 1.75 inches (4.44 cm). (Example: If rack height measures 3.50 inches (8.89 cm), it would use two rack units.)

\*\*Actual rack height of these models is less than the allotted rack space. Therefore, when installed in a standard rack console there may be a slight gap.

\*\*\*Actual height of monitors used with these racks exceeds rack height. Calculation for rack units includes the monitor.

♦Rack will accommodate one or two units. Blanking plate provided for unused monitor space.



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[www.pelco.com](http://www.pelco.com)

Indicates change or addition.

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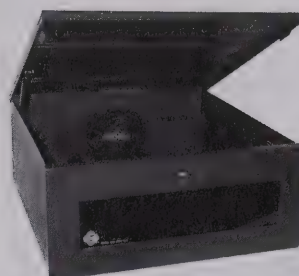


## LB1000 Series and LB2000 Lock Boxes

### VERTICAL/HORIZONTAL, TAMPER RESISTANT

#### Product Features

- Vented Side Panels
- Conduit Knockouts
- Pre-Wired, Filtered Fan Assembly
- Pre-Wired AC Cord (except LB1000DC)
- LB1000, LB1012, and LB2000 Have Two AC Duplex Outlets (One Internal, One External) Internally Fused for Accessories
- LB1000DC Has Three Terminal Blocks (Two Internal, One External) Internally Fused for Accessories
- Lock Boxes Can Be Stacked or Daisy-Chained Together
- Two 1-Inch (2.54 cm) Grommets Cable Ducts



LB1000



LB2000

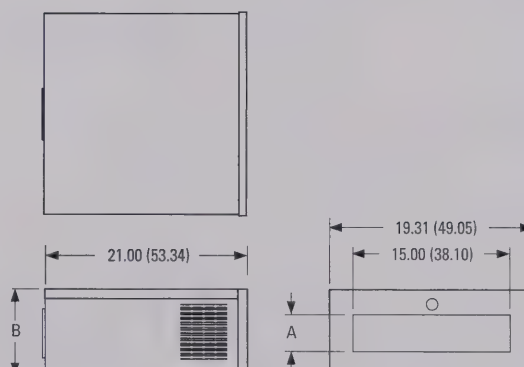
The **LB1000 Series** horizontal lock box is designed to provide high security protection for top- or front-loading VCRs. These lock boxes maintain security integrity for all tape recordings by means of a metallic front panel with tamper-resistant lock. The smoked acrylic window in the front panel allows complete viewing and monitoring of the unit during recording and operation.

The **LB1000** and **LB1000DC** are designed for use with a single VCR. The **LB1012** includes mounting brackets to accommodate an additional VCR, quad, or switcher. The brackets may be removed to accommodate a single, larger recorder.

Front-loading VCRs can be easily accessed by unlocking the forward-opening front panel. The gas-strut, hinged lid provides convenient access to all top-loading VCRs.

The **LB2000** is a vertical lock box designed to provide security protection for "tower type" computer disk drives or other vertically standing devices. The **LB2000** also has a smoked acrylic viewing window and forward-opening front panel with tamper-resistant lock for convenient access.

Added features such as vented side panels and a continuous-duty fan assembly help maintain an ambient operating temperature in all AC models; the **LB1000DC** is equipped with a 12 VDC thermostatically controlled heater and fan.



	LB1000, LB1000DC	LB1012
A	3.50 (8.89)	7.50 (19.05)
B	8.10 (20.57)	12.00 (30.48)
INSIDE USABLE DIMENSIONS*:		
W	18.00 (45.72)	18.00 (45.72)
H	7.75 (19.68)	11.50 (29.21) - ONE UNIT 5.50 (13.97) - TWO UNITS
D	18.25 (46.36)	18.25 (46.36)

\* MOUNTING BRACKETS IN LB1012 WILL ACCOMMODATE ONE ADDITIONAL DEVICE WITH THE FOLLOWING DIMENSIONS:  
 W = 15.00 (38.1) MINIMUM  
 18.00 (45.72) MAXIMUM  
 H = 5.50 (13.97)  
 D = 17.50 (44.45)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
 ALL OTHERS ARE INCHES.

LB1000/LB1012 DIMENSION DRAWING



DataFAX

SPEC: 2911

MANUAL: 29116 (LB1000 Series), 29126 (LB2000 Series)

C911 / REVISED 10-03

International Organization  
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 Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

LB1000	Horizontal lock box with 120 VAC, 60 Hz continuous-duty fan for top- or front-loading VCRs.
LB1000DC	Same as LB1000 except has three 3-position DC terminal blocks and 12 VDC thermostatically controlled heater and fan.
LB1012	Larger capacity horizontal lock box for one or two VCRs. Mounting brackets can accommodate an additional VCR or quad with a minimum width of 15 inches (38.1 cm) and maximum height of 5.5 inches (13.9 cm).
LB2000	Vertical lock box for "tower type" computer disk drives and vertically standing devices.

## ELECTRICAL

Power Connection	
LB1000DC	Three, 3-position terminal blocks (two internal, one external) internally fused
All AC Models	Input power cord plus two AC duplex power outlets (one internal, one external) internally fused
Cooling	
LB1000DC	Internal 12 VDC fan, thermostatically controlled, turns on at 100°F (37°C) and off at 70°F (21°C)
All AC Models	Internal 4-inch (10.16 cm) square fan, continuous duty, 120 VAC
Heating	
LB1000DC only	12 VDC, 20 watts, thermostatically controlled, turns on at 40°F (4°C) and off at 60°F (15°C)
Fusing	
LB1000DC	5A, Type 3AG
LB1000, LB1012, LB2000	3A, Type 3AG

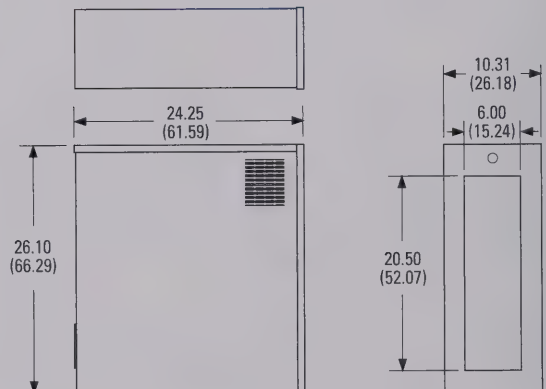
## GENERAL

Cable Entry	
LB1000 Series	Four conduit knockouts punched for 0.50-inch (1.27 cm) or 0.75-inch (1.90 cm) holes
LB2000	Two 1-inch (2.54 cm) grommited cable ducts Two 0.50-inch (1.27 cm) conduit knockouts Two 1-inch (2.54 cm) grommited cable ducts

Front Viewing Window	0.25-inch (6.35 mm) thick smoked acrylic
Window Viewing Area	
LB1000, LB1000DC	15.00" W x 3.50" H (38.1 x 8.89 cm)
LB1012	15.00" W x 7.50" H (38.1 x 19.05 cm)
LB2000	6.00" W x 20.50" H (15.24 x 52.07 cm)
Top Lid Assist	Gas strut (except LB2000)
Construction	16-gauge cold-rolled steel
Finish	Black polyester powder coat
Unit Weight	
LB1000	29.9 lb (13.60 kg)
LB1000DC	29.06 lb (13.18 kg)
LB1000MT	7.89 lb (3.58 kg)
LB1012	36.2 lb (16.29 kg)
LB2000	42.3 lb (19.22 kg)
Shipping Weight	
LB1000	38 lb (17.21 kg)
LB1000DC	37 lb (16.76 kg)
LB1000MT	12 lb (5.43 kg)
LB1012	45 lb (20.38 kg)
LB2000	55 lb (24.91 kg)

## OPTIONAL ACCESSORIES

LB1000MT	Wall mount kit for LB1000 Series
----------	----------------------------------



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

LB2000 DIMENSION DRAWING

Indicates change or addition.



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## LB3000 Series Lock Box

### WALL MOUNT, TAMPER RESISTANT

#### Product Features

- Holds VCR, Multiplexer, and Tapes
- Monitor Can Be Placed on Top of Lock Box
- Vented Top and Bottom Panels
- Wall Mount; Wiring Access Through Wall
- Tamper-Resistant Top and Side Panel Access for Connections
- LB3000PS Includes Integral Camera Power Supply

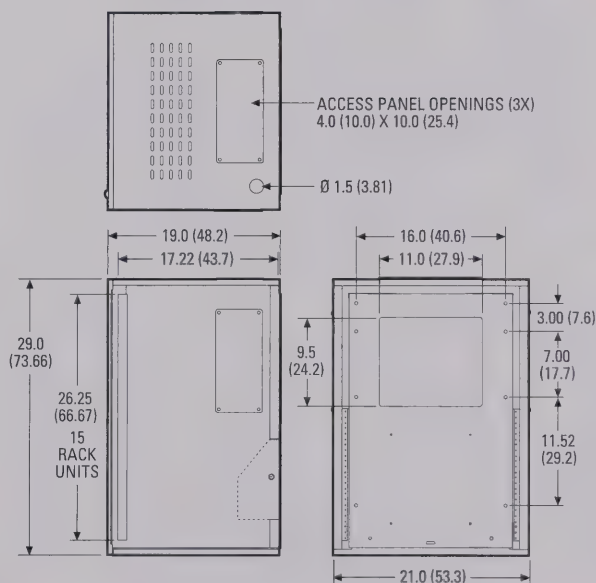
The **LB3000 Series** lock box provides a secure housing for a VCR, multiplexer, manuals, and up to 32 VCR tapes. Two keyed locks on the front door prevent unauthorized entry.

The **LB3000** and **LB3000PS** are designed for mounting to wall studs. Installation is easy: A mounting plate is attached to the wall over a standard outlet electrical box, and then the lock box is quickly fastened to the mounting plate. Cables for video and power cables are brought into the lock box through a hole in the wall. Panels with tamper-resistant screws in the top and sides of the lock box permit access for wiring.

An integral master power supply is provided with the **LB3000PS** to provide 24 VAC power to cameras that are connected to the multiplexer. The power supply can handle as many as 16 cameras.

Ventilation holes in the top and bottom of the **LB3000/LB3000PS** allow air to circulate through the unit so heat generated by the equipment can escape.

Inside the lock box, space is provided at the top for a rack-mounted multiplexer, such as Pelco's Genex® Series multiplexer. Below the multiplexer there is a shelf to place a VCR, such as Pelco's TLR3040, TLR3096, or TLR3168. Beneath the VCR is a small shelf for storage of documentation. Finally, two shelves in the bottom of the lock box permit storage of 16 video tapes each. A monitor, such as Pelco's PMC14H, can be set on top of the lock box to view surveillance activity.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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DataFAX  
SPEC: 21907  
MANUAL: 219076

C1907 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001



## MODELS

LB3000	Wall mount lock box for VCR, multiplexer, and VCR tapes
LB3000PS	Same as LB3000 except includes integral master power supply with 16 fused 24/28 VAC outputs

## RELATED PRODUCTS

MX4000 Series	Genex® multiplexer, 9- or 16-channels, color/monochrome, simplex/duplex
PMC14H	14-inch, high-resolution color monitor
TLR3040	24-hour real-time/40-hour time-lapse VCR
TLR3096	96-hour time-lapse VCR
TLR3168	168-hour time-lapse VCR

## ELECTRICAL

### (Model LB3000PS Only)

Input Voltage	120 or 240 VAC, 50/60 Hz
Output Voltage	24/28 VAC
Outputs	16
Supply Current	10 A
Maximum Current per Channel	3 A
Required Input Current	
120 VAC	2.20 A
240 VAC	1.15 A
Surge Protection	Yes
Output Fuse Rating	3 A
Output Connectors	Screw-type barrier strips
Output Wire Size	12-22 gauge, solid or stranded wire
Recommended Wiring Distances	See chart below

The following are the recommended maximum distances (transformer to load) and are calculated with a 10-percent voltage drop. (Ten percent is generally the maximum allowable voltage drop for AC-powered devices.) Distances are calculated in feet; values in parentheses are meters.

**Recommended Wiring Distance Chart**

Input Voltage	Total VA Consumed	Wire Gauge					
		20 AWG (0.5 mm <sup>2</sup> )		18 AWG (1.0 mm <sup>2</sup> )		16 AWG (1.5 mm <sup>2</sup> )	
24 VAC	10	283	(86)	451	(137)	716	(218)
	20	141	(42)	225	(68)	358	(109)
	30	94	(28)	150	(45)	238	(72)
	50	56	(17)	90	(27)	143	(43)
28 VAC	10	386	(117)	614	(187)	975	(297)
	20	193	(58)	307	(93)	487	(148)
	30	128	(39)	204	(62)	325	(99)
	50	77	(23)	122	(37)	195	(59)

## GENERAL

Maximum Load	65 lb (29.4 kg)
Mounting	Eight 3/8-inch mounting holes
Cable Entry	Opening in back of lock box: 9.5" H x 11.0" W (24.1 x 27.9 cm)
Environment	Indoor
Dimensions	29.0" H x 21.0" W x 19.0" D (73.6 x 53.3 x 48.2 cm)
Construction	
Lock Box	Aluminum
Mounting Plate	Steel
Mounting Plate Support	Steel
Finish	Charcoal gray polyester powder coat
Weight	Unit Shipping
LB3000	48 lb (21.7 kg) 59 lb (26.7 kg)
LB3000PS	65 lb (29.4 kg) 76 lb (34.4 kg)

## CERTIFICATIONS

- CE compliant
- UL Listed
- UL Listed to Canadian safety standards



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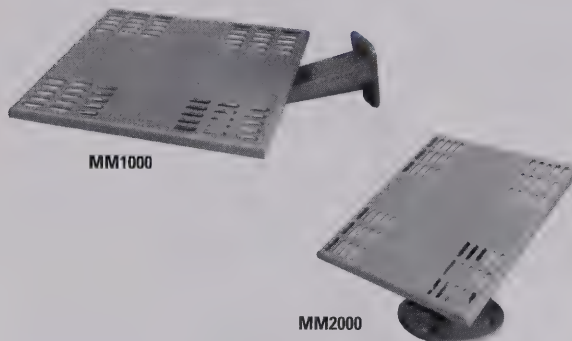
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## MM1000/MM2000/MM3000 Mount CEILING, PEDESTAL, WALL MOUNT, MONITOR

### Product Features

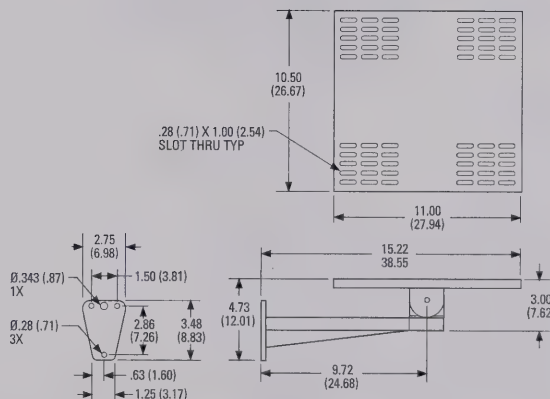
- Low Cost
- Supports up to 40 Pounds (18 kg)
- Designed for 9-Inch (22.86 cm) and 12-Inch (30.48 cm) CCTV Monitors
- Universal Monitor Mounting
- Attractive, Unobtrusive Design
- Lightweight for Fast, Easy Installation
- Ceiling, Pedestal, or Wall Mounting



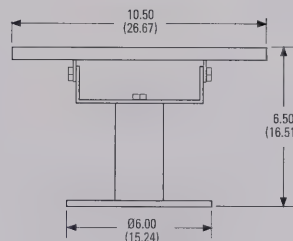
The **MM1000/MM2000/MM3000** are universal monitor mounts constructed from aluminum and capable of supporting a 9-inch (22.86 cm) or 12-inch (30.48 cm) monitor weighing up to 40 pounds (18 kg). The **MM1000** mounts to a wall or vertical surface; the **MM2000** mounts to a flat horizontal surface; and the **MM3000** attaches to a ceiling or flat, overhead surface.

The universal mounting head allows the **MM1000/MM2000/MM3000** to adapt to most 9-inch (22.86 cm) or 12-inch (30.48 cm) CCTV monitors on the market. Support pan extension brackets are provided to accommodate monitors with slightly different hole patterns or rubber feet. Horizontal and vertical adjustments allow you to position the monitor.

In addition, the **MM1000** can be adapted for mounting on a pole when used with the PA101 pole mount. (Minimum 3-inch diameter pole required.)



MM1000 DIMENSION DRAWING



MM2000 DIMENSION DRAWING

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2242

MANUAL: 22406 (MM1000/MM2000), 22426 (MM3000)

C242 / REVISED 10-00



International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

MM1000	Wall mount for 9-inch (22.86 cm) and 12-inch (30.48 cm) CCTV monitors
MM2000	Pedestal mount for 9-inch (22.86 cm) and 12-inch (30.48 cm) CCTV monitors
MM3000	Ceiling mount for 9-inch (22.86 cm) and 12-inch (30.48 cm) CCTV monitors

## MECHANICAL

Pan Adjustment	Unlimited 360°
Tilt Adjustment	
MM1000	+10°, -90°
MM2000	±45°
MM3000	45° maximum forward tilt
Monitor Mounting	Multiple slotted holes in monitor support pan (4 mounting screws required, not supplied)
Locking Method	3/8-16 Allen head bolts
Mounting Method	Secure to ceiling, wall, or horizontal surface as noted:
MM1000	Three 1/4-20 fasteners or one 1/4-inch diameter and one 5/16-inch diameter fastener for center mount holes in applications where wall studs are encountered
MM2000	Four 1/4-20 fasteners
MM3000	Two 1/4-20 fasteners (Minimum recommended size)

## GENERAL

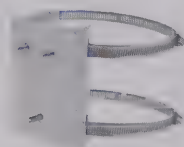
Construction	Aluminum
Finish	Gray polyester powder coat
Maximum Load	40 lb (18 kg)
Unit Weight	
MM1000	2.76 lb (1.25 kg)
MM2000	3.73 lb (1.69 kg)
MM3000	5.32 lb (2.42 kg)
PA101	0.88 lb (0.40 kg)
Shipping Weight	
MM1000	4 lb (1.81 kg)
MM2000	6 lb (2.71 kg)
MM3000	7 lb (3.17 kg)
PA101	2 lb (0.90 kg)

## CERTIFICATIONS

- UL Listed

## OPTIONAL MOUNT ADAPTERS

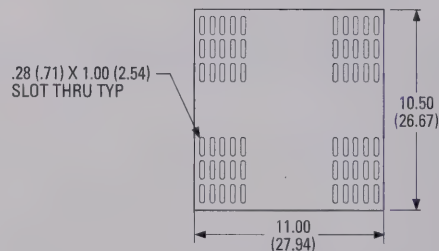
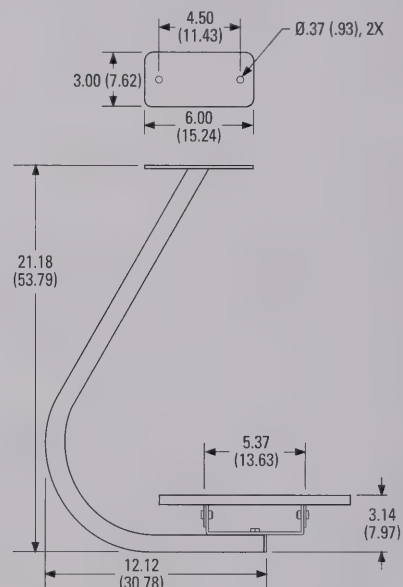
PA101	Pole mount adapter for MM1000.
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PA101



MM3000



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MM3000 DIMENSION DRAWING



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## MR5000L/MR5000M Ceiling/Wall CEILING/WALL MOUNT, MONITOR

### Product Features

- Attractive, Feedthrough Cable Design
- Designed Specifically for Pelco Color Monitors
- Available in Medium and Large Formats
- 15° Adjustable Tilt Angle
- Adjustable Collar Rotates 360° in Horizontal Plane
- Easy to Install
- Ceiling or Wall Mounting
- Available in Public Viewing Systems (Includes Integrated Camera Package, Monitor, and Mount)



MR5000L

The **MR5000 Series** ceiling mount is designed specifically for Pelco's PMC Series color monitors and is available in medium and large formats. The medium mount (**MR5000M**) supports up to 45 pounds (20.5 kg) and is designed for Pelco's PMC14H, PMCS14A, and PMCS17A monitors. The large mount (**MR5000L**) can support loads up to 66 pounds (30.4 kg) and is designed for Pelco's PMCS19A and PMC21A monitors.

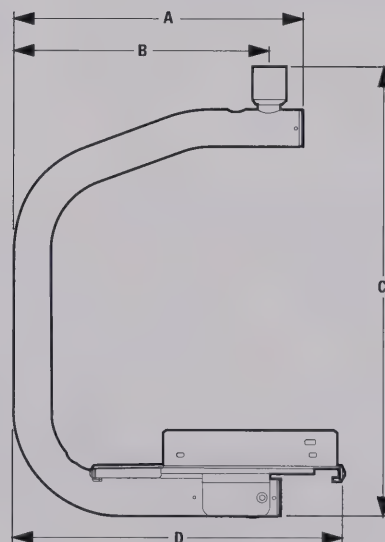
The **MR5000 Series** mount arm features an adjustable collar that rotates 360 degrees to allow positioning of the monitor without uninstalling the unit. The tilt table is also adjustable in 5-degree increments up to a 15-degree tilt angle.

Mount the **MR5000 Series** using the MRCA for ceiling mounting and the MRWA for wall mounting.

### Public Viewing System

Pelco's **MR5000** Public Viewing System is a completely integrated camera, monitor, and mount package designed for retail applications. The system provides a clear, visual warning to potential shoplifters that the premises are under surveillance. When properly installed, the Public Viewing System can be an effective deterrent against shoplifting.

Available Public Viewing Systems include choice of 14- or 21-inch monitor with a standard- or high-resolution color camera and varifocal lens, or bottom-mount Camclosure® with high resolution camera and 3-6 mm auto iris lens. Refer to the Selection Guide for available models.



Model	A	B	C	D
MR5000M	18.14 (46.08)	15.89 (40.36)	26.83 (68.15)	19.04 (48.36)
MR5000L	19.14 (48.62)	16.89 (42.90)	29.84 (75.79)	20.78 (52.78)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX

SPEC: 2229

MANUAL: 22216 (MR5000L), 22296 (MR5000M), 22266 (PCM5000), 224366 (ICS-DO101ABK)

C229 / REVISED 10-03



International Organization  
for Standardization  
Registered ISO 9001





# TECHNICAL SPECIFICATIONS

## MODELS

MR5000M	Ceiling mount for Pelco's PMC14H, PMCS14A, and PMCS17A monitors
MR5000L	Ceiling mount for Pelco's PMCS19A and PMC21A monitors

## RELATED PRODUCTS

MRCA	Ceiling mount adapter (uses four 5/16-inch diameter fasteners, not supplied).
MRWA	Wall mount adapter (uses a minimum of six 5/16-inch diameter fasteners, not supplied).

**Note:** The mounting surface must be able to support the total weight of the monitor and the mount.

## GENERAL

Tilt Angle	Adjustable in 5° increments; 15° maximum
Maximum Load	
MR5000M	45 lb (20.5 kg)
MR5000L	66 lb (30.4 kg)
Construction	
Tilt Table	Steel
Mount Arm	Aluminum
Finish	Black polyester powder coat
Unit Weight	
MR5000M	17.2 lb (7.8 kg)
MR5000L	18 lb (8.2 kg)
Shipping Weight	
MR5000M	23 lb (10.4 kg)
MR5000L	26 lb (11.7 kg)

## CERTIFICATIONS

- UL Listed\*
- UL Listed to Canadian safety standards\*
- ETL Listed\*\*
- ETL Listed to Canadian safety standards\*\*

\* UL listed when used with the PMC14H and PMC21A monitors and MRCA/MRWA mounting adapter.

\*\*ETL Listed when used with PMCS14A, PMCS17A, and PMCS19A monitors.

## RECOMMENDED MONITORS

PMC14H	Color monitor; 14-inch (35.56 cm) picture display, NTSC or PAL
PMCS14A	Color monitor; 14-inch (35.56 cm) picture display, NTSC or PAL
PMCS17A	Color monitor; 17-inch (43.18 cm) picture display, NTSC or PAL
PMCS19A	Color monitor; 19-inch (48.26 cm) picture display, NTSC or PAL
PMC21A	Color monitor; 21-inch (53.34 cm) picture display, NTSC or PAL

## PUBLIC VIEWING SYSTEM ACCESSORIES

The following accessories can be used to retrofit an MR5000M or MR5000L mount and monitor with a CC3700 Series camera and lens or Camclosure®. For complete Public Viewing System packages, refer to the selection guide below.

PCM5000	Light duty camera mount for CC3700 Series camera. The PCM5000 can be mounted to the top or bottom of the MR5000 Series mount arm. (Camera must be purchased separately.)
ICS-DO101ABK	Camclosure® integrated camera system with high resolution color camera, 3-6 mm auto iris lens, clear bubble, black powder coat finish, and special mount adapter for use on MR5000 Series.

## Public Viewing System Selection Guide

Monitor	Camera/Optics	Iris Type	System Part Number
PMC14H	CC3701H-2 and 13VA3-8	Manual	PVS14-CBV3
	CC3710S-6 and 13VA3-8	Manual	PVS14-CGV3
	ICS101-CRV3A	Auto	PVS14-CRV3A
PMC21A	CC3701H-2 and 13VA3-8	Manual	PVS21-CBV3
	CC3710S-6 and 13VA3-8	Manual	PVS21-CGV3
	ICS101-CRV3A	Auto	PVS21-CRV3A



**PVS21-CGV3**  
**MR5000 PUBLIC VIEWING SYSTEM WITH CAMERA**



**PVS21-CRV3A**  
**MR5000 PUBLIC VIEWING SYSTEM WITH CAMCLOSURE**

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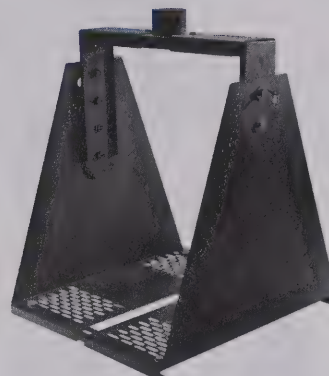
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## MR3000/MR3050 Mount CEILING/WALL MOUNT, MONITOR

### Product Features

- Ceiling or Wall Mounting
- Accommodates Various Monitors
- MR3000 Supports up to 40 Pounds (18 kg)  
MR3050 Supports up to 65 Pounds (29.45 kg)
- Tilt Angle Adjustable  $\pm 45^\circ$
- Adjustable Collar Rotates  $360^\circ$  in Horizontal Plane



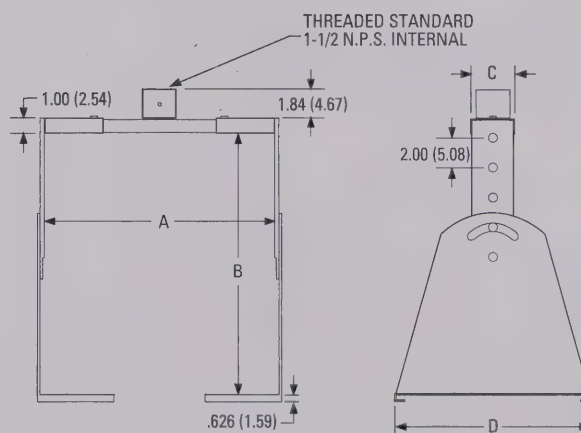
MR3000/MR3050

The **MR3000/MR3050** are universal monitor mounts engineered to mount a monitor safely from either a ceiling or a wall and designed for various applications such as educational institutions, churches, hospitals, convenience stores, and other security installations requiring flexibility in monitor mounting and positioning.

All mounts are adjustable. The **MR3000** will accept monitors with a minimum width and height of 10.12 inches (25.70 cm) by 11.50 inches (29.21 cm) or a maximum of 16.25 inches (41.27 cm) by 17.62 inches (44.75 cm). The **MR3050** will accept monitors with a minimum width and height of 14.00 inches (35.56 cm) by 15.00 inches (38.10 cm) or a maximum 21.00 inches (53.34 cm) by 20.00 (50.80 cm).

The adjustable collar rotates 360 degrees in a horizontal plane and allows you to reposition the monitor without unscrewing the pipe from the adapter. The perforations in the base plate accommodate various monitor mounting patterns, making the **MR3000** and **MR3050** truly universal monitor mounts.

An 8-inch (20.32 cm) section of 1.5-inch NPT threaded pipe is furnished with the mount to allow for either ceiling or wall mounting. Two optional adapters are available: the MRCA for ceiling mounting and the MRWA for wall mounting.



	A	B	C	D
MR3000	10.12 (25.70) MIN. 16.25 (41.27) MAX.	11.50 (29.21) MIN. 17.62 (44.75) MAX.	3.00 (7.62)	13.12 (33.32)
MR3050	14.00 (35.56) MIN. 21.00 (53.34) MAX.	15.00 (38.10) MIN. 20.00 (50.80) MAX.	3.00 (7.62)	17.00 (43.18)

NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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MR3000/MR3050 DIMENSION DRAWING



DataFAX  
SPEC: 2220  
MANUAL: 22206

C220 / REVISED 10-00

International Organization  
for Standardization  
Registered ISO 9001



# TECHNICAL SPECIFICATIONS

## MODELS

MR3000	Adjustable monitor mount for small monitors
MR3050	Adjustable monitor mount for medium or large monitors

## RELATED PRODUCTS

MRCA	Ceiling mount adapter (uses four 5/16-inch diameter fasteners, not supplied).
MRWA	Wall mount adapter (uses a minimum of six 5/16-inch diameter fasteners, not supplied).

**Note:** The mounting surface must be able to support the total weight of the monitor and the mount.

## GENERAL

Tilt Angle	Adjustable $\pm 45^{\circ}$
Maximum Load	
MR3000	40 lb (18 kg)
MR3050	65 lb (29.45 kg)
Construction	Steel
Finish	Black polyester powder coat
Unit Weight	
MR3000	11.42 lb (5.18 kg)
MR3050	19.95 lb (9.05 kg)
MRCA	1.22 lb (0.55 kg)
MRWA	11.35 lb (5.15 kg)
Shipping Weight	
MR3000	14 lb (6.34 kg)
MR3050	23 lb (10.42 kg)
MRCA	2 lb (0.9 kg)
MRWA	13 lb (5.88 kg)



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## MR4050 Mount

### CEILING/WALL MOUNT, MONITOR

#### Product Features

- Ceiling or Wall Mounting
- Accommodates Monitors 19 to 31 Inches (49 to 79 cm) Wide
- Supports up to 150 Pounds (68 kg)
- Tilt Angle Adjustable in Increments of  $\pm 20$  Degrees and  $\pm 40$  Degrees
- Replaces MR4000 Monitor Mount; Features Include Safety Straps and Fully Braced Monitor Support Pan



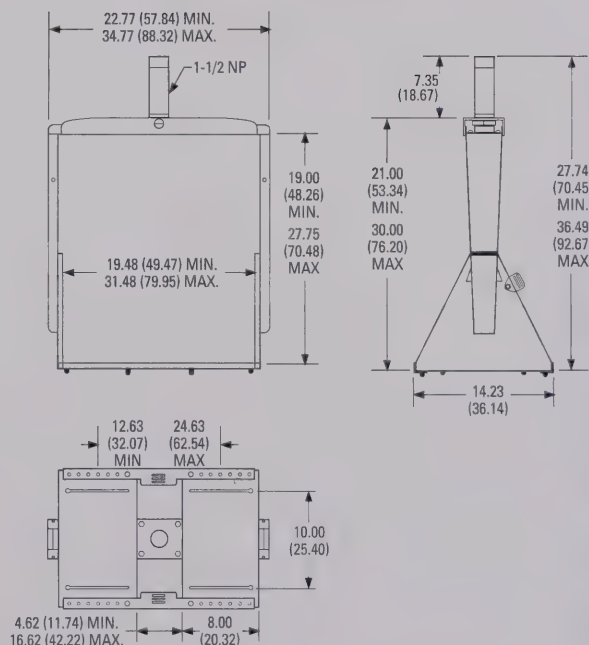
(SAFETY STRAPS NOT SHOWN)

The **MR4050** monitor mount is designed to mount a monitor safely from either a ceiling or a wall. It can be used in security systems, educational institutions, churches, hospitals, and other applications requiring overhead monitor mounting and positioning.

The **MR4050** will accept monitors from 19 to 31 inches (49 to 79 cm) wide and features safety straps and a fully braced monitor support pan. The safety straps wrap around the sides and back of the monitor to seat and stabilize the monitor in the support pan, thus minimizing monitor movement. The tilt angle for the monitor support pan is adjustable in increments of  $\pm 20$  degrees and  $\pm 40$  degrees. Cosmetic covers conceal locking bolts in the side arm brackets.

The **MR4050** will safely support monitors weighing up to 150 pounds (68 kg).

An 8-inch (20.32 cm) section of 1.5-inch NPT threaded pipe is furnished with the mount to allow for either ceiling or wall mounting. Two optional adapters are available: the MRCA for ceiling mounting and the MRWA for wall mounting.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.

RACKS AND CONSOLES  
MONITOR MOUNT



DataFAX  
SPEC: 2236  
MANUAL: 22366

C236 / REVISED 10-00

International Organization  
for Standardization  
Registered ISO 9001



## MODEL

MR4050 Universal monitor mount; fits monitors from 19 to 31 inches (49 to 79 cm) wide

## RELATED PRODUCTS

MRCA Ceiling mount adapter (uses four 5/16-inch diameter fasteners, not supplied).  
MRWA Wall mount adapter (uses a minimum of six 5/16-inch diameter fasteners, not supplied).

**Note:** The mounting surface must be able to support the total weight of the monitor and the mount.

## GENERAL

Tilt Angle	Adjustable increments of $\pm 20^\circ$ or $\pm 40^\circ$
Maximum Load	150 lb (68 kg)
Construction	Steel
Finish	Black polyester powder coat
Environment	Indoor only
Unit Weight	
MR4050	27.40 lb (12.43 kg)
MRCA	1.22 lb (0.55 kg)
MRWA	11.35 lb (5.15 kg)
Shipping Weight	
MR4050	31 lb (14.06 kg)
MRCA	2 lb (0.9 kg)
MRWA	13 lb (5.88 kg)



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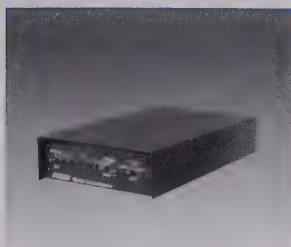
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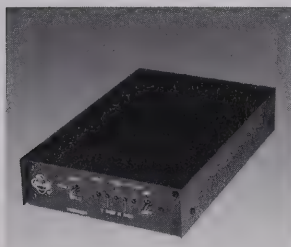


## MISCELLANEOUS CONTROL SITE

### Character Generation Product Line

#### Video Motion Detectors

Pelco's analog video motion detector provides consistent levels of detection and is immune to high levels of noise. Sensitivity automatically compensates for changes in light levels. Upon detection of motion, an audible alert is activated, and an auxiliary device such as a time-lapse VCR can be triggered.



#### Screen Splitters

Pelco's screen splitter can display video from two monochrome cameras onto one monitor and record the split display on videotape.



#### Time/Date Generator

Digital time/date generator superimposes time and date characters on the video signal for display on video equipment.



## NOTES

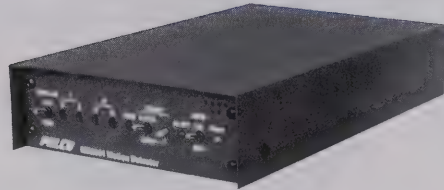


# MD2001 Motion Detector

## SINGLE CHANNEL, ANALOG VIDEO

### Product Features

- Easy to Install
- 120 or 230 VAC Models Available
- Detects Motion in a CCTV Camera Field of View
- Provides Extremely Consistent Detection Levels and High Levels of Noise Immunity
- On-Screen Window Defines Sensitized Detection Area on the Screen
- Adjustable Sensitivity Automatically Compensates for Changes in Light Levels
- Only Standard Video from a Camera Is Required
- Available Switch Closure to Start an Auxiliary Device Such as a Time-Lapse VCR

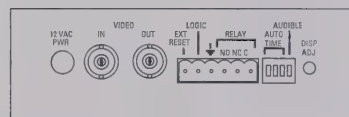
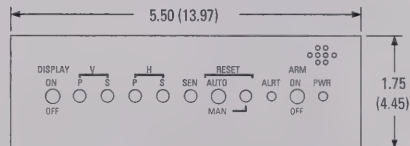
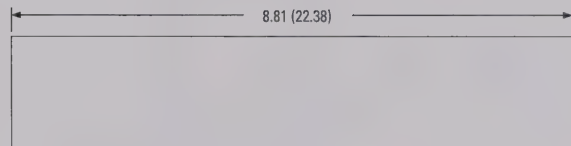


The **MD2001** is an analog video motion detector designed to detect motion in a CCTV camera field of view.

The **MD2001** utilizes solid-state circuitry and provides consistent detection levels and high levels of noise immunity. An on-screen window defines the sensitized detection area of the screen. Front panel controls allow for vertical and horizontal size and positioning of the detection area. Sensitivity is adjustable and automatically compensates for slow changes in light levels.

Only standard video from a camera is required. No external sync devices are necessary. The video input is passively looped to the output to allow the motion detector to be turned off with no loss of video.

Upon detection of motion, the **MD2001** alerts the operator with a two-tone audio beeper and a flashing LED, and provides a switch closure to start an auxiliary device such as a time-lapse VCR. Also, the **MD2001** allows for automatic or manual reset.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2616  
MANUAL: 26166

C616 / REVISED 10-97

International Organization  
for Standardization  
Registered ISO 9001



## MODELS

MD2001	Single channel, analog video motion detector, 120 VAC input.
MD2001-X	Same as MD2001 except 230 VAC input

## ELECTRICAL

Video Input	Passive looping: 525 lines, 60 Hz; 625 lines, 50 Hz
Power Input	1.5 VA at 12 volts RMS $\pm 15$ percent, 50/60 Hz (dedicated isolated power supply). 120 VAC wall transformer provided with unit (230 VAC wall transformer with MD2001-X)
Relay Contact Voltage	40 VDC or RMS maximum
Current	0.8 amp DC or RMS maximum (resistive load)
Logic Output	+10 volts logic, active low (grounded)
Connectors	Two video BNC connectors (Video In/Video Out) One 6-pin mating plug One 12 VAC power jack (for wall transformer power input)

## MECHANICAL

Alert Actions	Two-tone beeper, flashing LED (red), relay contacts, and logic output (active ground)
Sensitivity	Adjustable
Auto-On Timer	DIP switch with timer settings
Display Adjustment	Window outline from white to black

## CONTROLS

### Front Panel Controls and Indicators

DISPLAY	Toggle switch activates/deactivates detection window display
V (P and S)	Adjusts vertical positioning and size of detection window
H (P and S)	Adjusts horizontal positioning and size of detection window
SENS	Adjusts sensitivity
RESET (AUTO/MAN)	Toggle switch toggles automatic/manual; reset push button for manual reset
ALRT	Red LED flashes with motion detection
ARM	Toggle switch activates/deactivates relay logic output and audible alert functions
PWR	Green LED lights with power on

### Rear Panel Controls and Connections

EXT RESET	External reset connection
LOGIC	Logic output connection
⏏ (ground symbol)	Ground for LOGIC output or EXT RESET
RELAY	Normally open (N.O.) relay contact connection Normally closed (N.C.) relay contact connection Common (C) relay contact connection
AUTO TIME	DIP switch for automatic reset timer settings
AUDIBLE	DIP switch activates/deactivates audible buzzer
DISP ADJ	Adjusts detection area window outline from white to black

## GENERAL

Environment	Indoor only
Operating Range	32° to 120°F (0° to 49°C)
Construction	
Chassis	Steel, galvanized
Cover	Steel, black polyester powder coat
Front Panel	Aluminum, black polyester powder coat
Rear Panel	Steel, black polyester powder coat
Unit Weight	
MD2001	2.65 lb (1.20 kg)
MD2001-X	3 lb (1.36 kg)
Shipping Weight	4 lb (1.8 kg) (both models)

## OPTIONAL ACCESSORIES

DT200	Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.
R300	Rack mounting kit (1 RU) for up to three modules. Blank filler panels provided for less than three modules. (Factory racking available for R300 rack kit only. Specify when ordering.)



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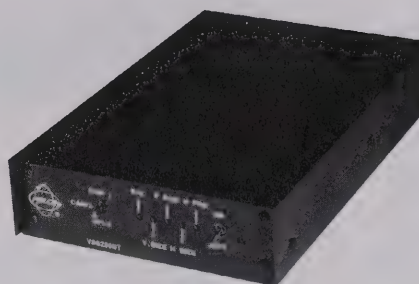


# VSS200DT Monochrome Screen Splitter

## SINGLE OR SIMULTANEOUS VIDEO DISPLAY

### Product Features

- Horizontal or Vertical Split
- Also Functions as a Two-Position Manual Switcher
- Displays Selected Video from Two Cameras on One Monitor
- Use with Monochrome Cameras Only
- Desktop Model; Can Be Rack Mounted
- Front Panel Adjustments
- Black Window Border

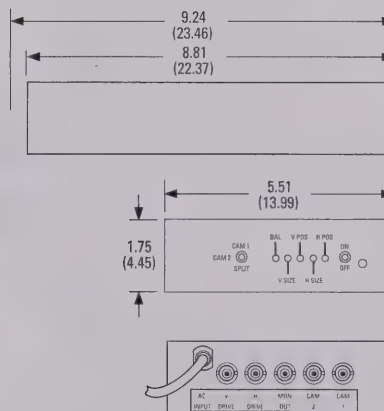


The **VSS200DT** displays video from a single camera or simultaneously displays selected portions of video from two cameras onto one monitor. In addition, this simultaneous display can also be recorded onto a single video tape recorder.

Front panel controls allow the video to be split either horizontally or vertically. The size and position of the split is also adjustable. A black window border distinguishes the video display.

The **VSS200DT** utilizes highly reliable CMOS technology and is easy to use.

This **VSS200DT** is a desktop unit that can be rack mounted. Up to three units can be mounted in a single 1.75- x 19-inch (4.44 x 48.26 cm) rack by using the R300 rack mount kit, or two units can be mounted side-by-side in one chassis using the DT200 dual desktop mount kit.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS; ALL OTHERS ARE INCHES.



DataFAX  
SPEC: 2627  
MANUAL: 26276

C627 / REVISED 11-98

International Organization  
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MISC. CONTROL SITE  
SCREEN SPLITTER

# TECHNICAL SPECIFICATIONS

## MODELS

VSS200DT	Screen splitter; simultaneously displays portions of video from 2 cameras on 1 monitor or full view of 1 camera
VSS200DT/220	Same as VSS200DT except 230 VAC operation

## VIDEO

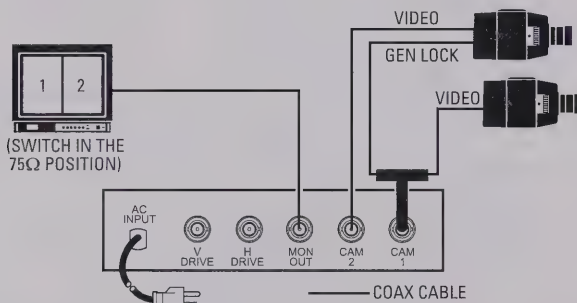
Inputs	Two (monochrome only)
Input Level	0.5 Vp-p to 2.0 Vp-p
Output Level	Same as input $\pm 0.5$ dB
Input Impedance	75 ohm
Channel Gain-Match	$\pm 0.5$ dB
Output Impedance	75 ohm
Video Bandwidth	12 MHz

## CONTROLS

On/Off Switch	Controls power to the unit
Vertical Positioning and Size	Screwdriver adjustments for vertical position and size of the split/insert
Horizontal Positioning and Size	Screwdriver adjustments for horizontal position and size of the split/insert
Balance (BAL)	Screwdriver adjustment controls video balance of the two pictures

### CAM1-CAM2-SPLIT

Toggle switch selects:	Camera 1 full screen (CAM1)
	Camera 2 full screen (CAM2)
	Split/insert (SPLIT)



TYPICAL CONFIGURATION USING GEN LOCK CAMERA

## ELECTRICAL

Input Voltage	95-135 VAC, 50/60 Hz or 230 VAC
Input Power	3 watts at 117 VAC
Connectors	
Video	BNC
Horizontal and Vertical Drive	BNC

## GENERAL

Camera Requirements	Use monochrome cameras only. Camera Types: Two externally synchronized cameras or One 2:1 interlaced camera as a master with one camera having horizontal and vertical drive or "GenLock" as a slave
Construction	Steel chassis and cover
Finish	Black polyester powder coat with white silk-screen
Weight	2 lb (0.9 kg)
Shipping Weight	4 lb (1.8 kg)

## OPTIONAL ACCESSORIES

DT200	Dual desktop mount kit; two units can be mounted side-by-side in one desktop chassis.
R300	Rack mounting kit (1 RU) for up to three modules. Blank filler panels provided for less than three modules. (Factory racking available for R300 rack kit only. Specify when ordering.)



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## TDG200DT Time/Date Generator

### TIME/DATE VIDEO DISPLAY

#### Product Features

- 120 or 230 VAC Input Models Available
- Jitter-Free Display
- Optional Battery Backup
- Desktop or Rack Mount
- Time and Date Sets Like an Electronic Digital Watch
- Display Positionable within 100% of Active Picture Area
- All Controls on Front Panel
- 99-Year Automatic Calendar

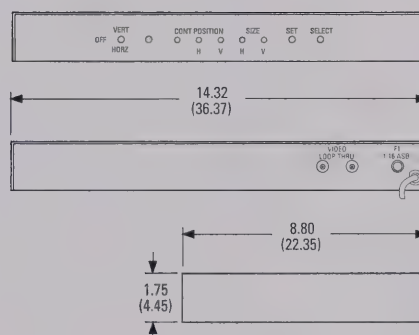


The **TDG200DT** is a digital time/date generator that superimposes time and date characters upon any video signal for presentation on a TV screen or video device, such as a monitor.

The **TDG200DT** incorporates many features not found on higher-priced units. Time and date functions set like an electronic digital watch, with time and date characters positionable within 100 percent of the active picture area. A hybrid character generating circuit provides a jitter-free character display. This display is related to instantaneous picture brightness, such that characters remain visible even in high brightness areas.

A ninety-nine year calendar automatically adjusts for the correct number of days in a month, including leap year. All controls are easily accessible on the front panel. An optional battery (TDG200BDT) ensures operation during power loss.

The **TDG200DT** is a desktop unit that can be rack mounted using the RKS10 rack mount kit.



NOTE: VALUES IN PARENTHESES ARE CENTIMETERS;  
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**DataFAX**  
SPEC: 2620  
MANUAL: 26206

C620/ REVISED 10-00



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# TECHNICAL SPECIFICATIONS

## MODELS

TDG200DT	Desktop time/date generator. Superimposes month-day-year, hour-minutes-seconds onto TV picture. 120 VAC
TDG200DT/220	Same as TDG200DT except 230 VAC operation
TDG200BDT	Same as TDG200DT, except with battery backup. Battery option includes trickle charging circuit, crystal controlled timing generator and Nicad battery. Assures that loss of timing accuracy will be negligible for a 200-hour period of power failure. 120 VAC
TDG200BDT/220	Same as TDG200BDT except 230 VAC operation

## CONTROLS

ON/OFF	Three position toggle switch:
Center/OFF	Bypass position
Up/VERT	Date displays below time
Down/HORIZ	Date displays to the right of time
SELECT	Pushbutton; advances control circuitry through 8 steps:
	1—All characters split
	2—Run/Normal
	3—Seconds
	4—Minutes
	5—Hours
	6—Days
	7—Months
	8—Years
SET	Recessed pushbutton. When depressed, starts automatic incrementing of selected digit. Stops clock when setting seconds.
Recessed Screwdriver Adjustments	Horizontal position, vertical position, character width, character height, and contrast
Automatic	99-year calendar automatically adjusts for number of days in month, including leap year

## ELECTRICAL

Input Voltage	120 VAC, 50/60 Hz or 230 VAC, 50 Hz
Power Requirements	2 watts
Connectors	BNC
Video Input	0.7 to 2.0 Vp-p, source terminated, composite video, sync negative. Accepts monochrome, NTSC, PAL, Palm, Secam, or CCIR, random or configured interlace. 50/60 Hz field rate, 401 to 1029 line rate
Video Output	Characters are superimposed upon input signal with high impedance bridging circuitry. Character amplitude is adjustable from less than 0.25V to greater than 1.0V
Fuse Protection	3 AG amp, 1/16 amp slow blow
Power Cord	3-wire grounded, 18 AWG

## GENERAL

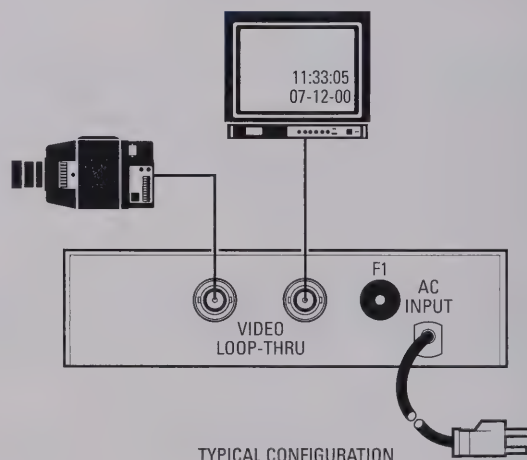
Character Height	Minimum is 1/10th of monitor screen height Maximum is 1/2 of monitor screen height
Construction	
Cover	Steel, black polyester powder coat
Chassis	Steel, zinc plated
Panel	Aluminum, black polyester powder coat with white silk-screen
Environment	32° to 120°F (0° to 49°C)
Humidity Tolerance	85%, non-condensing
Dimensions	
Desktop	1.75" H x 14.37" W x 8.80" L (4.45 x 36.49 x 22.35 cm)
Rack Mount	1.75" H x 19.0" W x 8.80" L (1 RU) (4.45 x 48.26 x 22.35 cm)
Weight	Unit Shipping
TDG200DT,	
TDG200DT/220	7.16 lb (3.25 kg) 8 lb (3.62 kg)
TDG200BDT,	
TDG200BDT/220	5.64 lb (2.55 kg) 7 lb (3.17 kg)

## CERTIFICATIONS/RATINGS

- CE, Class A (TDG200DT/220, TDG200BDT/220)
- UL Listed (TDG200DT, TDG200BDT)
- FCC, Class A (TDG200DT, TDG200BDT)
- Meets NEMA Type1 standards

## OPTIONAL ACCESSORIES

RKS10	Rack mounting kit. (Order one kit for each unit.)
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## REFERENCE MATERIALS

### Basic CCTV Information and Miscellaneous Cross-Reference Materials

The following pages address frequently asked questions of Pelco's Sales and Technical Support Group.

#### Coaxial Cable, An Overview

- Coax Construction
- Center Conductor
- Dielectric Insulating Material
- Braid or Shield
- Outer Jacket

#### Selecting Video Cable, An Overview

- Cable Runs
- Cable Termination

#### Voltage and Wiring Information

- 24 VAC Wiring Distance Chart
- Typical Video Coaxial Cable Requirements
- RS-485 Communication Recommendations
- Voltage Conversions

Also included are the following reference materials:

- **Replacement Parts Cross-Reference**

- Dome Bubble Part Numbers
- Motor Part Numbers for Pelco Scanners and Pan/Tilts

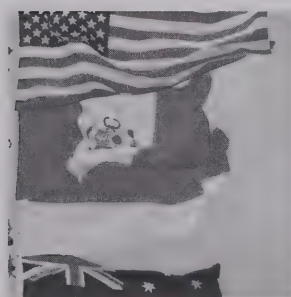
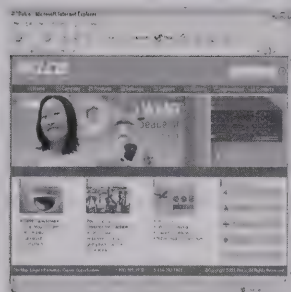
- **Contact Information**

- Domestic Sales
- International Sales
- International Service Centers
- In-House Sales Staff

- **DataFAX Cross-Reference**

- Need Product Information (Specifications or Manuals)?
- Access Pelco's Automated Fax Back System.

- **Product Index**



The most common means of conducting video signals from one piece of equipment to another is coaxial cable. Coaxial cable is often referred to as simply "coax". Not only is coax the most commonly used cable, but it is also the least expensive, most reliable, most convenient, and easily maintained way of transferring electronic images in a CCTV system.

Coax is available from many manufacturers and comes in a variety of sizes, shapes, colors, specifications, and capabilities. The most commonly recommended coax type is RG59/U, but this designation actually represents a family of cables with widely varying electrical characteristics. Other varieties like RG59/U are RG6/U and RG11/U; these are used predominately in CCTV and video work.

Though similar in many ways, each cable group has its own various physical and electrical characteristics, which must be taken into consideration.

All three coax cable groups are included in the same general family classification for coaxial cables. The RG reference is the cable specification for use as a "radio guide," while the numerical value helps differentiate the specifications of each individual cable. Although each cable has its own number, characteristics, and size, there is no difference in the way these different numbered cables work.

## Coax Construction

Common coax cable RG59/U, RG6/U, and RG11/U is circular. Each has a center conductor surrounded by dielectric insulating material, which in turn is covered by a braid to shield against electromagnetic interference (EMI). The outer covering is the jacket.

The coaxial cable's two conductors are separated by a nonconductive or dielectric material. The outer conductor (braid) acts as a shield and helps isolate the center conductor from spurious electromagnetic interference. The outer covering helps physically protect the conductors.

## Center Conductor

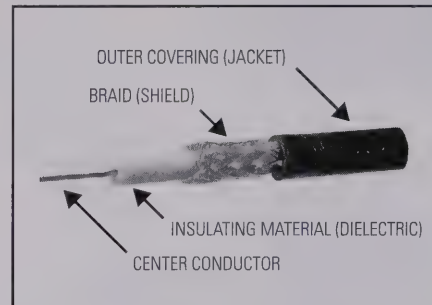
The center conductor is the primary means of carrying a video signal. The center conductor comes in varying diameters, usually ranging from 14 gauge to 22 gauge. The structure of the center conductor generally is solid copper or copper-clad steel, designated as bare copper weld, or BCW. For CCTV applications, solid copper conductors are required. Copper clad, copper weld, or BCW cables have much greater loop resistance at baseband video frequencies and should never be used for CCTV. To determine the type, look at the cut end of the center conductor. Copper clad cable will be silver in the center instead of copper all the way through. Variation in the size of the center conductor has an overall effect on the amount of DC resistance offered by cable. Cables which contain large diameter center conductors have lower resistances than cables with smaller diameters. This decreased resistance of large diameter cable enhances the ability of a cable to carry a video signal over a longer distance with better clarity, but it is also more expensive and harder to work with.

*For CCTV applications, solid copper conductors are required.*

For applications where the cable may move up/down or side-to-side, select cable that has a center conductor consisting of many small strands of wire. As the cable moves, these strands flex and resist wear due to fatigue better than a cable with a solid center conductor.

## Dielectric Insulating Material

Surrounding the center conductor is an evenly made dielectric insulating



material which is available in some form of either polyurethane or polyethylene. This dielectric insulator helps determine the operating characteristics of coax cable by

maintaining uniform spacing between the center conductor and its outer elements over the entire length of the cable. Dielectrics made of cellular polyurethane or foam are less likely to weaken a video signal than those made with solid polyethylene. This lower attenuation is desirable when calculating the loss/length factor of any cable. Foam also gives a cable greater flexibility, which may make an installer's job easier. Although foam dielectric material offers the best performance, it can absorb moisture, which will change its electrical behavior.

Because of its rigid properties, solid polyethylene maintains its shape better than foam and withstands the pressures of accidental pinching or crimping, but this characteristic also makes it slightly more difficult to handle during installation. In addition, its loss/length attenuation factor is not quite as good as foam, which should be considered in long cable runs.



## **Braid or Shield**

Wrapped around the outside of the dielectric material is a woven copper braid (shield), which acts as a second conductor or ground connection between the camera and the monitor. It also acts as a shield against unwanted external signals commonly called electromagnetic interference, or EMI, which may adversely affect a video signal.

The amount of copper or wire strands in the braid determine how much EMI it keeps out. Commercial grade coax cables containing loosely woven copper braid have shielding coverages of approximately 80 percent. These cables are suitable for general purpose use in applications where electrical interference is known to be low. They also work well when the cable is to be installed in metal conduit or pipe, which also aids in shielding.

If you are not sure of the conditions and are not running pipe to screen out more EMI, use a cable with a "maximum shield" or heavy braid-type cable containing more copper than those of commercial grade coax. This extra copper obtains the higher shielding coverage by having more braid material made in a tighter weave. For CCTV applications, copper conductors are needed.

Cables using aluminum foil shielding or foil wrap material are not suitable for CCTV installations. Instead, they usually are intended to transmit radio frequency signals such as those employed in transmitter systems or in master antenna distribution systems.

*Cables using aluminum foil shielding or foil wrap material are not suitable for CCTV installations.*

Aluminum or foil cable may distort a video signal to such a point that signal quality may be far below the level required for proper system operation, especially over long cable runs, and therefore is not recommended for CCTV use.

## **Outer Jacket**

The last component comprising a coax cable is the outer jacket. Although other materials are used, polyvinyl chloride, or PVC, is commonly used in its construction. Available in many colors, such as black, white, tan, and gray, the jacket lends itself to both indoor and outdoor applications.

There are two factors that govern the selection of cable: the location of cable runs, either indoor or outdoor, and the maximum length of the individual cable runs.

Video coaxial cable is designed to transmit maximum signaling energy from a 75-ohm source to a 75-ohm load with minimum signal loss. Excessive signal loss and reflection occurs if cable rated for other than 75 ohms is used. Cable characteristics are determined by a number of factors (core material, dielectric material, and shield construction, among others) and must be carefully matched to the specific application. Moreover, the transmission characteristics of the cable will be influenced by the physical environment through which the cable is run and the method of installation.

*Use only high quality cable and be careful to match the cable to the environment (indoor or outdoor). Solid core, bare-copper conductor is best suited to video applications, except where flexing occurs. In locations where the cable must be continuously flexed (that is, when used with scanners or pan/tilts), use cable intended for such movement. This cable will have a stranded wire core. Use only cable with pure copper stranding. Do not use cable with copper-plated steel stranding because it does not transmit effectively in the frequency range used in CCTV.*

*"Do not use cable with copper-plated steel stranding because it does not transmit effectively in the frequency range used in CCTV."*

*The preferred dielectric material is foam polyethylene. Foam polyethylene has better electrical characteristics and offers the best performance over solid polyethylene, but it is more vulnerable to moisture. Use cable with solid polyethylene dielectric in applications subject to moisture.*

In the average CCTV installation, with cable lengths of less than 750 feet (228 m), RG59/U cable is a good choice. Having an outside dimension of approximately 0.25 inches, it comes in 500- and 1,000-foot rolls.

For short cable runs, use RG59/U with a 22-gauge center conductor, which has a DC resistance of about 16 ohms per 1,000 feet (304 m). For longer runs, the 20-gauge variety which has a DC resistance of approximately 10 ohms per 1,000 feet will work well. In either case, cables with polyurethane or polyethylene as the dielectric material are readily available.

For installations requiring cable runs between 800 (244 m) and 1,500 feet (457 m), RG6/U is best. Having the same electrical characteristics as RG59/U, its outer dimension also is about equal to that of RG59/U. RG6/U comes in 500-, 1,000- and 2,000-foot rolls, and it may be obtained in a variety of dielectric and outer-jacket materials. Due to its large-diameter center conductor of about 18 gauge, RG6/U has a DC resistance of approximately 8 ohms per 1,000 feet (304 m) and can deliver a signal farther than RG59/U.

Use RG11/U to exceed the capability of RG6/U. Once again, the electrical characteristics of this cable are basically the same as the others. The center conductor can be ordered in 14- or 18-gauge sizes, producing a DC resistance of approximately 3-8 ohms per

1,000 feet (340 m). Being the largest of the three cables at 0.405 inches, it is more difficult to handle and install. RG11/U cable usually is delivered in 500-, 1,000- and 2,000-foot rolls.

Because of special applications, variations of RG59/U, RG6/U and RG11/U frequently are introduced by manufacturers.

Due to changes in fire and safety regulations throughout the country, Teflon® and other fire-retardant materials are becoming more popular as outer-jacket and dielectric materials. In case of a fire, these materials do not give off the same poisonous fumes as PVC-type cables, and therefore, are considered safer.

For underground applications, direct burial cables, made specifically for that purpose, are recommended. The outer jacket of this type of cable contains moisture-resisting and other materials that protect the cable, allowing it to be placed directly into a trench.

With numerous choices available, finding the right video cable for each camera application should be easy. After the installation has been properly assessed, read the equipment specifications and complete the appropriate calculations.

## Cable Runs

Although coax cable has built-in losses, the longer and smaller the cable is, the more severe the losses become; and the higher the signal frequency, the more pronounced the losses. Unfortunately this is one of the most common and unnecessary problems currently plaguing CCTV security systems as a whole.

If, for example, your monitor is located 1,000 feet (304 m) from the camera, approximately 37-percent of the high frequency information will be lost in transmission. The unfortunate aspect of this condition is that it is not obvious. You cannot see information that is not there and may not even realize that information has been deleted. Because many CCTV security systems have cable runs that exceed several thousand feet, unless you are aware of this characteristic of cable, your system may be providing a seriously degraded image.

So, if your cameras and monitors are separated by lengths greater than 750 feet (228 m), you should check to make certain that some provision has been made to guarantee the video signal's transmission strength.

## Cable Termination

In video security systems, camera signals must travel from the camera to the monitor. The method of transmission is usually coax cable. Proper termination of cables is essential to a system's reliable performance.

Because the characteristic impedance of coax cable ranges from 72 to 75 ohms, it is necessary that the signal travels on a uniform path along any point in the system to prevent any picture distortion and to help ensure proper transfer of the signal from the camera to the monitor. The impedance of the cable must remain constant with a value of 75 ohms. To properly transfer power between two video devices with acceptable losses, the signal output from the camera must match the input impedance of the cable, which in turn must match the input impedance of the monitor. The end point of any video cable run must be terminated in 75 ohms. Usually, the cable run will end at the monitor, which will ensure that this requirement is met.

*"The end point of any video cable run must be terminated in 75 ohms."*

Usually the video input impedance of the monitor is controlled by a switch located near the looping video (input/output) connectors. This switch allows for either 75-ohm termination if the monitor is the end point, or Hi-Z for looping to a second monitor. Check equipment specifications and instructions to determine the proper termination requirements. Failure to terminate signals properly usually results in a high contrast, slightly grainy picture. Ghosting and other signal imperfections also may be evident.



## 24 VAC Wiring Distance Chart

The following chart can be used as a guideline to determine the necessary wire gauge and maximum cable distance for 24 VAC applications where 2-conductor wire is used to power equipment such as enclosures with 24 VAC accessories (heater, blower, etc.), 24 VAC domes (such as Spectra®), 24 VAC receivers, or other equipment using low voltage input.

(Do not use this chart to determine wire runs for pan/tilts; conductor requirements and cable distances are specified on the applicable pan/tilt spec sheet.)

The following are the recommended maximum distances for 24 VAC applications and are calculated with a 10-percent voltage drop. (10-percent is generally the maximum allowable voltage drop for AC-powered devices.)

**Example:** An enclosure that requires 80 VA and is installed 35 feet (10 m) from the transformer would require a minimum wire gauge of 20 AWG.

**Note:** Distances are calculated in feet; values in parentheses are meters.

Total VA	Wire Gauge					
	20 AWG (0.5 mm <sup>2</sup> )	18 AWG (1.0 mm <sup>2</sup> )	16 AWG (1.5 mm <sup>2</sup> )	14 AWG (2.5 mm <sup>2</sup> )	12 AWG (4.0 mm <sup>2</sup> )	10 AWG (6.0 mm <sup>2</sup> )
10	283 (86)	451 (137)	716 (218)	1142 (348)	1811 (551)	2880 (877)
20	141 (42)	225 (68)	358 (109)	571 (174)	905 (275)	1440 (438)
30	94 (28)	150 (45)	238 (72)	380 (115)	603 (183)	960 (292)
40	70 (21)	112 (34)	179 (54)	285 (86)	452 (137)	720 (219)
50	56 (17)	90 (27)	143 (43)	228 (69)	362 (110)	576 (175)
60	47 (14)	75 (22)	119 (36)	190 (57)	301 (91)	480 (146)
70	40 (12)	64 (19)	102 (31)	163 (49)	258 (78)	411 (125)
80	35 (10)	56 (17)	89 (27)	142 (43)	226 (68)	360 (109)
90	31 (9)	50 (15)	79 (24)	126 (38)	201 (61)	320 (97)
100	28 (8)	45 (13)	71 (21)	114 (34)	181 (55)	288 (87)
110	25 (7)	41 (12)	65 (19)	103 (31)	164 (49)	261 (79)
120	23 (7)	37 (11)	59 (17)	95 (28)	150 (45)	240 (73)
130	21 (6)	34 (10)	55 (16)	87 (26)	139 (42)	221 (67)
140	20 (6)	32 (9)	51 (15)	81 (24)	129 (39)	205 (62)
150	18 (5)	30 (9)	47 (14)	76 (23)	120 (36)	192 (58)
160	17 (5)	28 (8)	44 (13)	71 (21)	113 (34)	180 (54)
170	16 (4)	26 (7)	42 (12)	67 (20)	106 (32)	169 (51)
180	15 (4)	25 (7)	39 (11)	63 (19)	100 (30)	160 (48)
190	14 (4)	23 (7)	37 (11)	60 (18)	95 (28)	151 (46)
200	14 (4)	22 (6)	35 (10)	57 (17)	90 (27)	144 (43)

Maximum distance from transformer to load

## Typical Video Coaxial Cable Requirements

Cable Type*	Maximum Distance
RG59/U	750 ft (228 m)
RG6/U	1,000 ft (304 m)
RG11/U	1,500 ft (457 m)
Consult factory	Above 1,500 ft (457 m)

\* Minimum cable requirements:

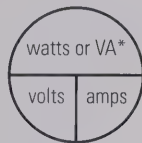
- 75 ohms impedance
- All-copper center conductor
- All-copper braided shield with 95% braid coverage

## RS-485 Communication Recommendations

Maximum cable distance for RS-485 communication over 24-gauge wire is 4,000 feet (1,219 m). Pelco recommends using shielded twisted pairs such as Belden 9843, or similar cable that meets or exceeds the basic requirements for EIA RS-485 applications.

## Voltage Conversions

Within our various product specification sheets we often list the power consumption and voltage requirements for that particular product. In order to determine power source requirements, refer to the following conversion formulas.



To determine amps (**using watts**):

$$\text{watts} \div \text{volts} = \text{amps} \quad (\text{e.g., } 85.5 \div 24\text{V} = 3.56 \text{ amps})$$

To determine amps (**using volt amps**):

$$\text{volt amps} \div \text{volts} = \text{amps} \quad (\text{e.g., } 75 \text{ VA} \div 24\text{V} = 3.12 \text{ amps} \\ 75 \text{ VA} \div 115\text{V} = 0.64 \text{ amp})$$

To determine watts (**using amps**):

$$\text{volts} \times \text{amps} = \text{watts} \quad (\text{e.g., } 24\text{V} \times 3.56 = 85.44 \text{ watts})$$

To determine volt amps (**using amps**):

$$\text{amps} \times \text{volts} = \text{volt amps} \quad (\text{e.g., } 3.12 \times 24\text{V} = 74.88 \text{ VA} \\ 0.64 \times 115\text{V} = 73.6 \text{ VA})$$

\* Watts and VA are the same in a DC circuit, but they are different in an AC circuit. VA, which is higher than watts in an AC circuit, is used when calculating AC power requirements. The same formula can be used, however.

## Measurement Conversions

Other conversion formulas you may need to know are listed below.

When you Know	Multiply by	To Find
meters	100	centimeters (cm)
inches	2.54	centimeters (cm)
inches	25.40	millimeters (mm)
centimeters	.03280	feet (ft)
meters	3.28	feet (ft)
pounds	0.45	kilograms (kg)
kilograms	2.21	pounds (lb)
feet	.3048	meters (m)
miles	1.61	kilometers (km)

## DOME BUBBLES

Model Number	(Dome Size Diameter)	Dome Color	Viewing Window	Part Number
<b>Current Models</b>				
DF5 Series	5.9 inches (14.99 cm)	Smoked Clear Heavy-duty, Clear	— — —	MF00-7060-084A MF00-7060-085A MF00-7050-462B
DF8 Series	8.5 inches (21.59 cm)	Smoked bronze Black opaque Black opaque* Black opaque** Chrome Gold White opaque	— Smoked Clear Clear — — Clear	80810015-08 80810015-00 80810011-1 80810015-01 80810011-2 80810011-3 80810015-10
ICS100/ ICS150 Series Camclosure	3.75 inches (9.52 cm)	Smoked Clear Opaque liner	— — —	MF00-4250-213A MF00-4250-203A MF00-4250-202A
Spectra® Series	5.9 inches (14.99 cm)	Smoked Clear Chrome Gold Heavy-duty, Clear	— — — — —	MF00-7050-563A MF00-7050-562A MF00-7050-564A MF00-7050-565A MF00-7050-462B
Spectra III™ Pressurized	5.9 inches (14.99 cm)	Heavy-duty, Smoked Heavy-duty, Clear	— —	MF00-7050-463B MF00-7070-462B
*In-ceiling models only      **Pendant models only				

Model Number	(Dome Size Diameter)	Dome Color	Viewing Window	Part Number
<b>Discontinued Models</b>				
ED2500, ED2600, ED2700,	14 inches (35.56 cm)	Black opaque Black opaque Black opaque	Smoked Clear Clear	ED254004COMP ED254020COMP ED28DOME-CLP
ED2800, ED2900 Series	20 inches (50.80 cm)	Clear	—	ED284100COMP
Intercept® (DD08 Series)	8.5 inches (21.59 cm)	Black opaque Black opaque Chrome Gold Clear	Smoked Clear — — —	8084100COMP 8084101COMP 8084102COMP 8084103COMP 8084105COMP
Intercept® (DD14 Series)	14 inches (35.56 cm)	Black opaque Black opaque Chrome Gold Smoked	Smoked Clear — — —	8144100COMP 8144101COMP 8144102COMP 8144103COMP 8144104COMP
PDF8	8.5 inches (21.59 cm)	Black opaque Black opaque	Smoked Clear	80810011-0 80810011-1
SB19C	8.5 inches (21.59 cm)	Black opaque	Clear	80810011-1
SB19D	8.5 inches (21.59 cm)	Black opaque	—	SB19D1000
SB1900 Series	8.5 inches (21.59 cm)	Black opaque Black opaque Gold	Smoked Clear —	SB194200COMP SB194300COMP SB194201COMP
SB2500 Series	14 inches (35.56 cm)	Black opaque Black opaque Chrome	Smoked Clear —	SB25DOME-SMP SB25DOME-CLP SB254030COMP
SB26C	14 inches (35.56 cm)	Black opaque	Clear	81410001-1
SB26D	14 inches (35.56 cm)	Black opaque	—	SB25D1000
SB2600 Series	14 inches (35.56 cm)	Black opaque Black opaque Chrome	Smoked Clear —	8144100COMP 8144101COMP 8144102COMP
SB2800 Series	20 inches (50.80 cm)	Black opaque Black opaque Chrome	Smoked Clear —	SB3DOME-SMP SB284006COMP SB34007COMP
SS2000 Series	14 inches (35.56 cm)	Black opaque Chrome	Smoked —	S20004300COMP SS204200COMP
SS3000 Series	20 inches (50.80 cm)	Black opaque Chrome	Smoked —	S30004003COMP SS334200COMP

**Note:** Due to possible enhancements or modifications, part numbers are subject to change without notice.



## SCANNER AND PAN/TILT MOTORS

Model Number	Description	Part Number
PS30A	Pan motor Pan motor gearhead	1758008* 1758009*
PS30-24	Pan motor Pan motor gearhead	5708008* 1758009*
PS7	Pan motor and gearhead assembly	2708000
PS7-24	Pan motor and gearhead assembly	PS78001
PT175-24P, PT180-24P, PT180-24SL	Pan motor and gearhead assembly Tilt motor Tilt motor gearhead	2508001 5708008* 1758009*
PT270P	Pan motor and gearhead assembly Tilt motor and gearhead assembly	2508000 2708000
PT270-24P	Pan motor and gearhead assembly Tilt motor and gearhead assembly	2804001COMP PS78001
PT270P/230	Pan motor and gearhead assembly Tilt motor and gearhead assembly	2508220 2708220
PT280-24P Series	Pan motor and gearhead assembly Tilt motor and gearhead assembly	2508001 PS78001
PT480P Series	Pan motor Pan motor gearhead Tilt motor Tilt motor gearhead	9048010 9048002 9048000 9048001
PT480-24P Series	Pan motor Pan motor gearhead Tilt motor Tilt motor gearhead	9048000 9048002 9048000 9048001
PT550P	Pan or tilt motor and gearhead	1558004A
PT570P Series, PT573R	Pan or tilt motor Pan or tilt motor gearhead	1758008 1758009
PT570-24P Series, PT573-24R	Pan or tilt motor Pan or tilt motor gearhead	5708008* 1758009*
PT680-24P Series	Pan motor Pan motor gearhead Tilt motor Tilt motor gearhead	5708008* 5804044COMP* 5808002* 5804045COMP*
PT780P Series	Pan or tilt motor Pan or tilt motor gearhead	1758008* 1758009*
PT780-24P Series	Pan motor Pan motor gearhead Tilt motor Tilt motor gearhead	5708008* 1758009* 5808002* 5808003*
PT780-VS Series	Pan motor and gearhead assembly Tilt motor and gearhead assembly	9068102 8068101
PT1250DC Series	Pan or tilt motor and gearhead assy	Not Available
PT1250P, PT1253P, PT1253R, PT1260EX, PT1280P	Pan or tilt motor Pan or tilt motor gearhead	12508110 12508111
PT1250P/220, PT1260EX/230	Pan or tilt motor Pan or tilt motor gearhead	12508115** 12508114**
PT2000L	Pan or tilt motor and gearhead assy	20008009
PT2501P	Pan or tilt motor and gearhead assy	20008010
PT7100/PT7150 Series, PT7700RX or PT7700WX Series (except as noted below)	Pan or tilt motor Pan or tilt motor gearhead	1758008* 1758009*
PT7100-3 or PT7150-3 (only) PT7723RX-3, PT7723RX-3/PP, PT7729RX-3, PT7729RX-3/PP, PT7729WX-3	Pan motor Pan motor gearhead Tilt motor Tilt motor gearhead	5708008* 1758009* 5808002* 5808003*

\*For units manufactured prior to February, 1999 you will need to replace both the motor and gearhead.

\*\*For units manufactured prior to November, 1992 you will need to replace both the motor and gearhead.

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California, Southern	Ken Massrey Associates, Inc.
Canada	Access Direct Marketing
Colorado	Intermountain Marketing
Connecticut	T.H. Grogan & Associates, Inc.
Delaware	Langbaum Associates, Inc.
District of Columbia	1 Volt Associates, Inc.
Florida	Florida/Caribbean Marketing, Inc.
Georgia	Florida/Caribbean Marketing, Inc.
Hawaii	Ken Massrey Associates, Inc.
Idaho, Eastern	Intermountain Marketing
Idaho, Western	GP Marketing, Inc.
Illinois, Northern	Keith Parker & Associates
Illinois, Southern	R.W. Kunz & Associates
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Utah	Intermountain Marketing
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North Carolina  
Ohio  
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Puerto Rico  
Rhode Island  
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	Model Number	Spec	Manual
<b>0-9</b>	12FA Series	2782	27476
	12VA Series	2752	27486
	12VD Series	2757	27486
	12ZM8X15C	2743	27496
	12ZV Series	2739	27496
	13FA Series	2783	27476
	13FD Series	2736	27476
	13VA Series	2754	27486
	13VD Series	2758	27486
	13ZD Series	2741	27496
	13ZM Series	2744	27496
<b>A</b>	AH1000/AH2000	2255/2266	22546
	ALM2064	21517	215176
<b>B</b>	BB53-PB	22440	224426
	BB53-PG	22440	224426
	BB53-PG-E	22440	224426
	BB53-PR-E	22478	224786
	BB53-PRS-E	22478	224786
	BB53-PRM-E	22478	224786
	BB53-PSG-E	22437	224376
	BB53-SMB	22440	224406
	BB53-SMW	22440	224406
	BB53F	22440	224416
	BB53F-E	22440	224416
	BB53HD-F	22429	224656
	BB53HD-PG	22429	224666
	BB53HD-PG-E	22429	224666
	BB53T-F	22446	224416
	BB53T-F-E	22446	224416
	BB53T-PB	22446	224426
	BB53T-PG	22446	224426
	BB53T-PG-E	22446	224426
	BB53T-SMB	22446	224406
	BB53T-SMW	22446	224406
	BS1750	2217	22186
<b>C</b>	CC1400HZ16-* Series	21960	219606
	CC3610H Series	22914	229146
	CC3651H-2X	21988	219846
	CC3701H-2 Series	21937	219376
	CC3710H Series	22916	229146
	CC3710S Series	22917	229146
	CC3751H-2	21988	219886
	CC3770H Series	22915	229156
	CCC1370H-2 Series	21938	219616
	CCC2400H-4 Series	21997	219896
	CCC2400S-4 Series	21996	219896
	CE4/CE9/CE16 Series	2906	29066
	CM100	2266	22356
	CM1300	2216	22166
	CM1450	2201	22016
	CM1750, CM1750S	2217	22186
	CM1750EXT	2217	22196
	CM3512	2268	22696
	CM400	2281	22816
	CM4400 Series	2244	22446
	CM6700 Matrix	2523	Not Available
	CM6800 Matrix, 32x6	21522	Not Available
	CM6800E Matrix, 48x8	21528	Not Available
	CM9740 Series Matrix	21508	Not Available
	CM9760 Series Matrix	2540	Not Available
	CM9760-ALM	2572	25726
	CM9760-CDU-T	21940	219406
	CM9760-CXTA	2539	Not Available
	CM9760-DMR	21520	Not Available
	CM9760-HS	2578	Not Available

	Model Number	Spec	Manual
<b>D</b>	CM9760-MDA	2573	Not Available
	CM9760-REL	2538	25386
	CM9760-SAT	21510	Not Available
	CM9760-VCRC	21491	219416
	CM9760-VCRC-P	21491	219436
	CM9770 Matrix	21555	Not Available
	CX9000 Series	2554	25546
	DA104DT	2605	26056
	DD5-FM	21461	214616
	DF5 Series	21458	214586
	DF5 Series DomePak	21452	see DataFAX Catalog #2
	DF5-0F, DF5-1F	21458	214816
	DF5HD	21458	224326
<b>E</b>	DF5S Series	21458	214756
	DF8 Series, in-ceiling	21448	214486
	DF8 Series, pendant	21448	224336
	DT200	2965	28116
	DX1000 Series	2680	Not Available
	DX2000 Series	2690	Not Available
	DX3100 Series	2695	Not Available
	DX7100 Series	2641	Not Available
	DX8000 Series	2623	Not Available
	DX9100 Series	2636	Not Available
	DX9200 Series	2634	Not Available
	E1003	2401	24056
	E2020	21493	24056
	E2100	2407	24056
	E706 Series	2415	24156
	EA2000	2632	26326
	EA2010	2630	26306
	EA4348	2238	22796
	ECM100	2238	22256
	EH100-8/EH100-10	21464	214646
	EH1000	2401	24016
	EH2020	21493	214936
	EH2100/EH2100P	2407	24076
	EH2400	21468	214686
	EH2500 Series	21473	214736
	EH3010/EH3014	2404	24046
	EH3508 Series	21435	24786
	EH3512/EH3515 Series	2478	24786
	EH4010/EH4014	2413	24136
	EH4700 Series	21405	214056
	EH4700L Legacy® Series	2342	214156
	EH4700DB Series	21446	214466

This listing identifies the specification sheets and manuals available through DataFAX. Please note that some manuals are not available due to size limitations. However, all product manuals and specification sheets are available in Adobe PDF format through Pelco Online ([www.pelco.com](http://www.pelco.com)). Please use Pelco Online to obtain copies not available through DataFAX or contact Pelco if you do not have internet access.

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# DATAFAX CROSS-REFERENCE

Model Number	Spec	Manual
EH5700 Series	21431	214316
EH5700L Legacy® Series	2342	214226
EH8100 Series	2410	214076
EH8106L Legacy®	21420	214206
EHX*E Series	2417	24176
EM1009U	2202	22026
EM1015U	2202	22026
EM1109	2207	22076
EM1400	2260	22606
EM1450	2261	22616
EM1900U	2202	22026
EM2000	2207	22076
EM22	2227	22276
EM2200	2207	22076
EM2400	2260	22676
EM3000	2262	22626
EM3512	2277	22686
EM4400 Series	2244	22446
EPM	2238	22256
EPP	2238	22256
ERD2200	21506	215066
ERD97P21-U	2571	29396
ES3012 Series	2306	Not Available
ES30C, ES31C	2307	23076
ES30PC, ES31PC	2311	Not Available
EWM	2238	22256
GIT100	2600	26006
HS1500	2493	24936
HS2000	2493	24946
HS2100	21465	214656
HS2400	21468	214706
HS2500 Series	2486	24866
HS3000/HS3020	2483	24836
HS3020CA	2483	22086
HS4012	2488	24886
HS4514 Series	21472	214726
HS8000/HS8013	2480	24806
HS8080/HS8134	21466	214666
HSWM12	2488	22596
ICS-DO101ABK	2229	224366
ICS090 Camclosure® Series	22462	224626
ICS100 Camclosure® Series	22407	224076
ICS100-AP	22425	224506
ICS100-PG	22425	224266
ICS150 Camclosure® Series	22407	224106
ICS150-P	22425	224256
ICS200 Camclosure® Series	22406	224066
ICS200-CM	22425	22986
ICS300 Camclosure® Series	22408	224086
ICS300-AP	22425	224516
ICS300-COND	22425	22966
IDM4018	2203	22036
IPS-CABLE	22453	Not Available
IPS-RDPE-2	22453	224736
IPS-RMK	22453	224536
IRD2024	21506	215066
IWM Series	2203	22886
KBD100	2529	25296
KBD200A	2526	Not Available
KBD300A	2527	Not Available
KBD4000	21918	Not Available
KBD4002	2581	Not Available
KBD9000	2551	25516
KBD960, KBD960-X	21519	Not Available
KBR960, KBR960-X	21519	Not Available

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L		
LB1000	2911	29116
LB1000DC	2911	29116
LB1012	2911	29116
LB2000	2911	29126
LB3000/LB3000PS	21907	219076
LD53HDCF-1	22429	224656
LD53HDCPB-1	22429	224666
LD53HDF-1	22429	224656
LD53HDPB-1	22429	224666
LD53PB-0	22440/22446	224426
LD53PB-1	22440/22446	224426
LD53PB-2	22440/22446	224426
LD53PB-3	22440/22446	224426
LD53PR-0	22478	224786
LD53PR-1	22478	224786
LD53PSB-0	22437	224376
LD53PSB-1	22437	224376
LD53SMB-0	22440/22446	224406
LD53SMB-1	22440/22446	224406
LD53SMB-2	22440/22446	224406
LD53SMB-3	22440/22446	224406
LD53SMW-0	22440/22446	224406
LD53SMW-1	22440/22446	224406
LD53SMW-2	22440/22446	224406
LD53SMW-3	22440/22446	224406
LD5F-0	22440/22446	224416
LD5F-1	22440/22446	224416
LD5F-2	22440/22446	224416
LD5F-3	22440/22446	224416
LDC100	2784	27846
LL27 Series	2920	29206
LL27LM	2920	22066
LL27M	2920	29206
LRD41A11 Series	2553	25536
LRD41C21, LRD41C22 Series	2557	25576
LWM41	2283	22836
M		
MC3610H Series	22913	229136
MC3651H-2 Series	21985	219856
MC3710H Series	22918	229136
MC3710S Series	22919	229136
MCC1370H-2	21939	219616
MCC2400S-4 Series	21998	219896
MCS Series	2653	26536
MCS*E Series	2655	26556
MD2001, MD2001-X	2616	26166
MLZ6DT	2516	25176
MM1000, MM2000	2242	22406
MM22	2227	22286
MM3000	2242	22426
MPS524DT	2545	25456
MPT24DT	2520	25206
MPT9000CZ, MPT9000PZ Series	2550	Not Available
MPT9500 Series	2535	25356
MPTAZ Series	2528	25286
MR3000, MR3050	2220	22206
MR4050	2236	22366
MR5000L	2229	22216
MR5000M	2229	22296
MRCA	2234	22346
MRD1400HZ16	21960	219736
MRWA	2234	22376
MS500 Series	2820	28206
MX4000SVR	21919	219236
MX4004CD, MX4004CD-X	21995	Not Available
MX4009CD, MX4009CD-X	21920	Not Available



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MX4009CS, MX4009CS-X	21922	Not Available
MX4009MD, MX4009MD-X	21921	Not Available
MX4009MS, MX4009MS-X	21923	Not Available
MX4016CD, MS4016CD-X	21920	Not Available
MX4016CS, MX4016CS-X	21922	Not Available
MX4016MD, MX4016MD-X	21921	Not Available
MX4016MS, MX4016MS-X	21923	Not Available
NET300	22908	Not Available
NET300RK	2965	229096
NET350	22907	Not Available
NET350RK	2965	229096
NET4001A	22904	Not Available
NVR300	2611	Not Available
PA100	2227	22506
PA101	2201/2260/ 2261/2215/ 2242	22506
PA102	2571/2554 2266/2915	22506
PA2000, PA2010	2255/2266	22536
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PMCL15A	21965	219656
PMCS14A	21991	219916
PMCS17A	21991	219916
PMCS19A	21991	219916
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PMM15A Series	22902	229026
PMM20A Series	22902	229026
PMM9A Series	22902	229026
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PP350, PP351, PP450, PP451	2212	22126
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PS20 Series	2361	23616
PT1250DC Series	2373	23736
PT1250P Series	2370	23706
PT1260EX Series	2368	23686
PT1280P, PT1280SL	2379	23796
PT270P Series	2323	23236
PT280-24P	2324	23246
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PT680-24P	2337	23376
PT780 Legacy® Series	2342/21420	23426
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QD104M, QD104M-X	2660	26606
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R400	2965	28126
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RM6010	2967	29606
RMA10T	2967	219986
RMA1201	2967	28046
RMA14F	2967	219516
RMA14T	2967	219986
RMA1501	2967	29196
RMA17T	2967	219986
RMA19T	2967	219986
RMA901	2967	29186
RMJ9UC	2967	29746
RMJ9UCA	2967	29376
RMQ10T	2967	219976
RMQ14T	2967	219966
RMQ17T	2967	219966
RMQ4	2965	28146
SCM100	2266	22356
SPA102	2266	22506
Spectra III Heavy Duty	22429	224656/224666
Spectra III Pressurized	22478	224786
Spectra III (SD53TC) Series	22446	224406/ 224416/224426
Spectra III SE (SD53) Series	22440	224406/ 224416/224426
Spectra III Stainless Steel	2437	224376
ST1	2255/2266	22556
SWM-BK/SWM-GY	2293	22936
SWM-CA/SWM-CA24	2293	22956
SWM-PA-BK/SWM-PA-GY	2293	22946
TB1750	2217	22186
TDG200DT Series	2620	26206
TF2000	2656	Not Available
TF9000	2656	Not Available
TLR3040	2671	Not Available
TLR3096	2672	Not Available
TLR3168	2673	Not Available
TXB-AD	21492	Not Available
TXB-B	21492	Not Available
TXB-S422	21492	Not Available
TXB-V	21492	Not Available
VA6100 Series	2840	28406
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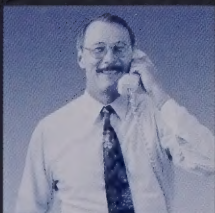
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